Land Management Support

PT-MAPPER PROFESSIONAL™

for Local Government

USER MANUAL

Version 5.62 and higher

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CONTENTS

CONTENTS *3*

1. INTRODUCTION TO PT-MAPPER PRO *7*

2.1 PT-MAPPER PRO LICENCE STATEMENT 8
2.2 ORDNANCE SURVEY COPYRIGHT 8
2.3 INSTALLATION 8
2.4 REGISTRATION 8
2.5 DE-INSTALLATION 8
2.6 UPDATES 9

3. STARTING PT-MAPPER PRO *10*

3.1 TIMELOCK 10
3.2 OPEN A DEMO MAP 10

4. USING PT-MAPPER PRO *11*

4.1 SCREEN EXPLANATION 11
4.1.1 Tabbed Maps *11*
4.1.2 Layers *11*
4.1.3 Customisable Toolbars *11*
4.1.4 Status Bar *11*
4.2 MENU LISTS AND TOOL ICONS 12
4.2.1 Edit *12*
4.2.2 View *13*
4.2.3 Tasks *13*
4.2.4 Objects *14*
4.2.5 Draw *15*
4.2.6 Tools *16*
4.2.7 Units *17*
4.2.8 Options *17*

5. LAYERS *19*

5.1 LAYER OVERVIEW 19
5.2 SETTING UP LAYERS 20
5.2.1 Add a New Layer *20*
5.2.2 The "Active" Layer *21*
5.2.3 Changing the Layer Order *21*
5.2.4 Making Objects on a Layer Visible or Not *21*
5.2.5 Making Objects on a Layer Selectable or Not *21*
5.2.6 Pen Parking Layer *21*
5.2.7 Set All Layers *21*
5.2.8 Moving an Object/Objects to Another Layer *22*
5.2.9 Edit the Layer Name *22*
5.2.10 Transparency *22*
5.2.11 Layer Number *22*
5.3 LAYER THEMES/LAYER GROUPS 22
5.4 LAYER SCALE RANGES 23
5.5 SELECTING OBJECTS ON A MAP 24
5.5.1 Selecting Areas *24*
5.5.2 Selecting Lines *24*
5.5.3 Selecting Text *24*

6. BASIC OPERATIONS *25*

6.1 OPEN A MAP 25
6.2 IMPORT A MAP FROM CAD OR OTHER SOFTWARE 25
6.3PAGE SET UP AND SCALING 26
6.4 NAVIGATE AROUND THE MAP 26
6.4.1 Zoom *26*

6.4.2 Pan ... *26*
6.4.3 View Page ... *26*
6.4.4 View All Objects ... *26*
6.4.5 Scroll ... *27*
6.4.6 View Selected Object ... *27*
6.4.7 Fit Page to Selected Object(s) ... *27*
6.4.8 Centre Page ... *27*
6.5 SELECTING OBJECTS ON THE MAP ... 27
6.5.1 Point Objects ... *27*
6.5.2 Lines ... *27*
6.5.3 Polygons ... *27*
6.5.4 Multi-selection ... *27*
6.6 DRAW ON THE MAP ... 28
6.6.1 Draw Line ... *28*
6.6.2 Joining Lines ... *28*
6.6.3 Joining Line Segments ... *28*
6.6.4 Cutting a Line ... *28*
6.6.5 Joining Lines to make a Polygon ... *28*
6.6.6 Draw Polygon ... *29*
6.6.7 Draw Rectangle ... *29*
6.6.8 Draw Measured Shape – Circle, Box, or Line ... *29*
6.6.9 Draw Arrow ... *29*
6.7 TEXT ... 30
6.7.1 Adding Text to a Map ... *30*
6.7.2 Edit Text ... *30*
6.7.3 Move Text ... *30*
6.7.4 Rotate Text ... *30*
6.7.5 Add a symbol ... *30*
6.8 MARKERS ... 31
6.8.1 Place a Marker ... *32*
6.9 IDENTIFIERS ... 32
6.9.1 View Existing Identifiers ... *32*
6.9.2 Add an Identifier ... *33*
6.9.3 Edit an Identifier or Description ... *34*
6.9.4 Deleting an Identifier ... *34*
6.9.5 Locate ... *34*
6.9.6 Select a Number of Objects by their ID's ... *34*

6.10 TITLE BLOCKS ... *34*

6.11 LEGEND CREATION TOOL ... 36
6.12 STREET FINDER ... 36
6.13 SCHEDULE MAKER ... 37
6.13.1 Display a Schedule ... *37*
6.13.2 Save the Schedule ... *37*
6.14 GOOGLE EARTH LINK ... 37

7. PRINTING ... *41*

7.1 PRINT VIEW ... 41
7.2 PRINT PAGE ... 41
7.2.1 Key points about the page ... *41*
7.2.2 Set Paper Size and Map Scale ... *41*
7.3 SELECTING THE PRINTER ... 42
7.4 HOW TO PRINT THE WHOLE MAP ... 42
7.5 PRINTING BEST FIT TO PAGE ... 42
7.6 MAKING LINES PRINT THICKER ... 42
7.7 PRINTING EXAMPLES ... 42
7.7.1 Paper size currently set to A3. Wish to print whole map on A4. ... *42*
7.7.2 Problems? ... *42*
7.7.3 Map is currently 1:10,000 on A4. You want a map of a small area at, say, 1:1250 on A4. ... *43*

8. EMAILING MAPS ... *44*

8.1 CREATE A PDF FILE ... 44

8.2 CREATE A PNG FORMAT MAP 44
9. TYPICAL TASKS *45*
9.1 DRAW LINES AND MEASURE DISTANCE 45
9.2 DRAW A CIRCLE 45
9.2.1 Concentric Circle *46*
9.3 SPLIT AREAS E.G. WOODLAND COMPARTMENTS 46
9.4 COMBINE AREAS 47
9.5 COLOURING AREAS OF A MAP 48
9.6 CREATING A LEGEND 48
9.7 CHANGE AN OBJECT'S LAYER 48
9.8 GROUP LAYERS INTO THEMES 49
9.9 CUTTING OUT A MAP 50
9.10 COPY A MAP INTO A REPORT OR DOCUMENT 50
9.11 ADDING TREES TO A MAP 51
9.11.1 Plot Single Trees according to specified dimensions *51*
9.11.2 Plot Trees including Canopy Spread directly from Tree Survey Results *51*
9.12 BUFFERING TOOL 52
9.13 RED-LINE AN AREA 54
10. SAVE THE MAP *55*
10.1 GENERAL 55
10.2 BACK-UP 55
10.3 BACK-UP OPTION 55
11. TROUBLE-SHOOTING *56*
11.1 MAP CLEANER 56
11.2 MAP EXPERT 56
11.3 OTHER PROBLEMS 56
11.3.1 Can't select an object? *56*
11.3.2 Slow to print? *57*
11.3.3 Area won't divide? *57*
11.3.4 Printing problems? *57*
11.4 HELP 57
APPENDIX A: TRANSFERRING MAPS TO A MOBILE DEVICE *58*
APPENDIX B: WORKING WITH .SHP FILES *58*
B.1 IMPORTING A SHP FILE 59
B.2 EXPORTING A SHP FILE 59
INDEX *62*

1. INTRODUCTION TO PT-MAPPER PRO

PT-Mapper Pro has been designed specifically for those who are not IT specialists and who are unlikely to be working on mapping as their main profession but who nevertheless need a competent, easy to use, robust system to help them in their work.

About PT-Mapper:
PT-Mapper can handle a wide variety of maps and images, but in Great Britain the maps are likely to be based on Ordnance Survey's MasterMap data or on CAD drawings supplied by client companies. The software enables you to:

- Measure distances and areas accurately
- Colour areas to show council ownership/responsibility
- Plot assets, trees, play equipment, streetlights, benches etc.
- Add your own information to a map.
- Create maps of allotments, play areas, sports fields etc.
- Create maps for special events – annual carnival, shows etc.
- Maintain and keep updated cemetery maps provided by Pear Technology.
- View/print the whole map or parts of a map at any scale on any size paper.
- Email maps to those without Pear software.
- Incorporate maps into reports and other documents.
- Exchange maps with other mapping/GIS/CAD software used by principal authorities.
- Link to Google Earth for aerial imagery.

Demo maps:
For Windows XP computers, demo maps can be found in the My Documents\Pear Technology\PTMapper\Sample Maps folder. For Vista/Windows 7 users, the demo maps are found in Desktop\Libraries\Documents\Pear Technology\PTMapper\Sample Maps folder. They include:

a) An example of an OS large-scale MasterMap vector map.
b) The Farm Demo map – an example of a finished farm map.
c) An example of Ordnance Survey 1:25K raster maps.
d) An example of a scanned map.

For those who want a blank page for sketching in, there is a file called BlankMap.mpd.

Map Units:
Although the PT-Mapper Pro default setting is to show distances in metres and areas in hectares, the units of measure can be changed by selecting Units on the top menu line.

Jargon:
Throughout this Guide, we have tried to minimise jargon. However, there are some terms which are difficult to escape. Here they are:

Node	Each line section in a vector map is joined at a node and the node point represents a set of easting and northing coordinates stored in the map file. These nodes become visible as black dots on a red line when a map object, such as a line or building is selected. Nodes can be dragged, cut, deleted or inserted using the mapping tools.
Polyline	Any line on the map which can be made up of any number of sections.
Polygon	An enclosed area with any number of sides. Examples would be buildings, ponds, fields. **The area within a boundary can only be measured if the boundary is a closed (i.e. sealed) polygon.**
Layers	Maps are constructed in layers or overlays, analogous to overhead transparencies. Each type of map object can be placed on its own layer, and each layer can be switched on or off independently and given its own colouring system.

2.1 PT-Mapper Pro Licence Statement

This software is protected by both United Kingdom copyright law and international copyright treaty provisions. Therefore, you must treat this software just like a book, except that you may copy it onto a computer to be used and you may make archival copies of the software for the sole purpose of back-up and protecting your investment from loss.

By saying "just like a book", Pear Technology Services Ltd. mean that the software may be used by any number of people and may be freely moved from one location to another, so long as there is no possibility of it being used at one location while it is being used at another. Just like a book that cannot be read by two different people in two different places at the same time, the software cannot be used by two different people in two different places at the same time.

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2.2 Ordnance Survey Copyright

The Ordnance Survey digital map data incorporated with this software are protected by Crown Copyright. They can only be used as demonstration/evaluation data with PT-Mapper Pro and may not be copied, resold or distributed in any other form, without the prior written permission of Ordnance Survey.

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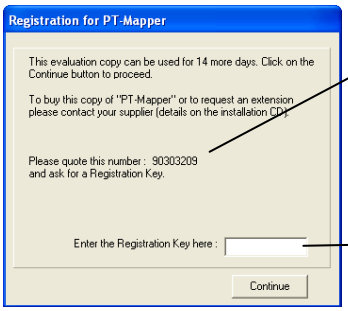
2.3 Installation

Requires Windows XP, Vista or 7.. Will not run on Apple systems unless Windows is also installed.
Insert the CD, wait a few seconds and PT-Mapper Pro will automatically start to install, then follow the on-screen instructions. A short-cut icon will automatically be placed on your Desktop.

2.4 Registration

To enable users to try out PT-Mapper Pro before committing themselves to a purchase, the programme comes with a 14-day timelock on it. Within the 14 day period, you can click on the Continue button (see below) and PT-Mapper will work normally. To continue using PT-Mapper Pro beyond this time, a Registration Unlock Key is required which will be specific to each computer. The Registration Unlock Key can be obtained from your supplier, usually on receipt of payment. Until the programme has been registered, print-outs will have "Unregistered Copy" superimposed on the map.


Registration for PT-Mapper
This evaluation copy can be used for 14 more days. Click on the Continue button to proceed.
To buy this copy of "PT-Mapper" or to request an extension please contact your supplier (details on the installation CD).
Please quote this number : 90303209
and ask for a Registration Key.
Enter the Registration Key here :
Continue

Telephone, email, fax your supplier with this number. Please allow up to 24 hours for the Registration Unlock Key to be sent back to you.

When you have your Registration Unlock Key, type the number in here. The program will then be opened for indefinite use.

2.5 De-Installation

From the Desktop, click on Start, Settings, Control Panel, Add/Remove Programs. Click on PT-Mapper Pro and then on the Remove button. De-installation will be thorough and will not impact other programmes or your maps.

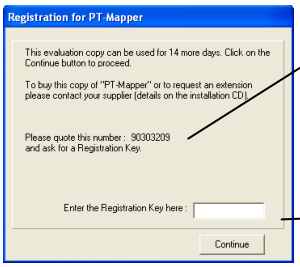
2.6 Updates

In PT-Mapper, click on Help, Check for Updates and your program can be automatically updated via the Internet. Updates from a CD can be installed as for a first time installation – the new programme will simply overwrite the old. This will not affect any maps that have been saved provided that they have not been saved in the same folder as the PT-Mapper Pro programme.

3. STARTING PT-MAPPER PRO

3.1 Timelock

To enable users to try out PT-Mapper Pro before committing themselves to a purchase, the programme comes with a 14-day timelock on it. Within the 14 day period, you can click on the Continue button (see below) and PT-Mapper will work normally. To continue using PT-Mapper Pro beyond this time, a Registration Unlock Key is required which will be specific to each computer. The Registration Unlock Key can be obtained from your supplier, usually on receipt of payment. Until the programme has been registered, print-outs will have "Unregistered Copy" superimposed on the map.


Registration for PT-Mapper
This evaluation copy can be used for 14 more days. Click on the Continue button to proceed.
To buy this copy of "PT-Mapper" or to request an extension please contact your supplier (details on the installation CD).
Please quote this number : 90303209 and ask for a Registration Key.
Enter the Registration Key here :
Continue

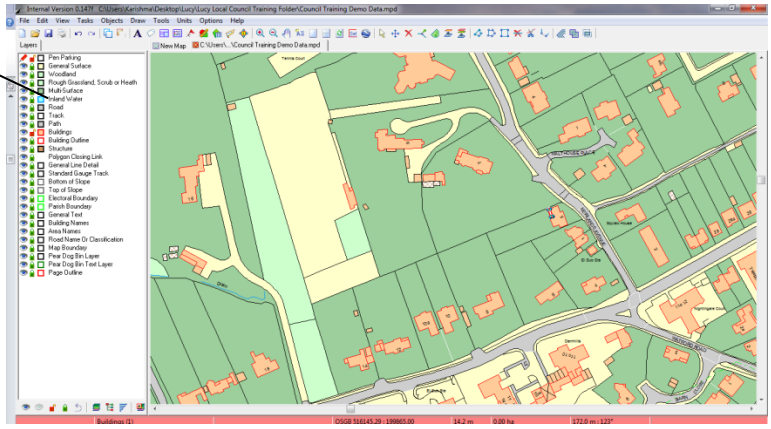
Telephone, email, fax your supplier with this number. Please allow up to 24 hours for the Registration Unlock Key to be sent back to you.

When you have your Registration Unlock Key, type the number in here. The program will then be opened for indefinite use.

3.2 Open a Demo map

Click on File, Open and select the MasterMap Demo map:

List of layers.

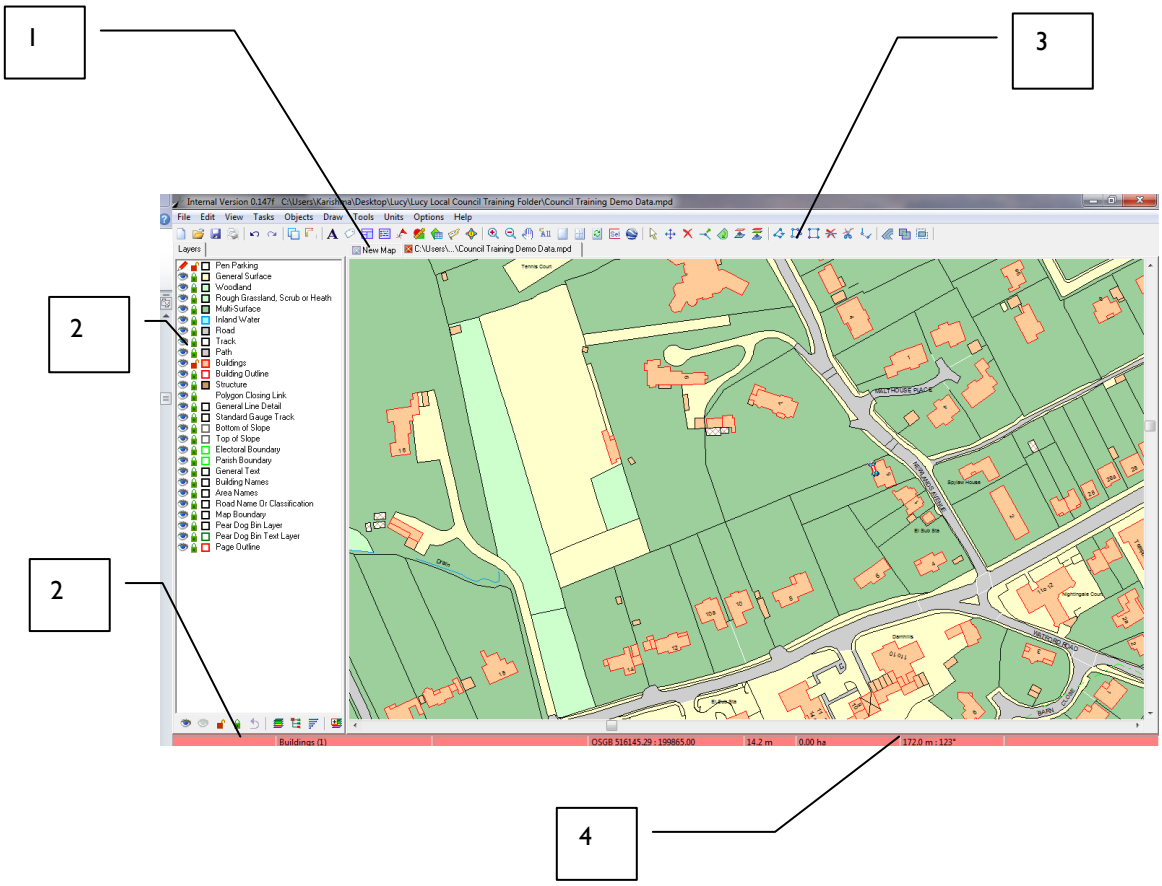


3.3 Open your Council Map

If Pear Technology have already supplied you with a map of your parish or town council area, it is probable that the map has been installed on either the computer that has been designated for mapping work or, more likely, on the office server so that all authorised users can access it. If Pear installed the syetm, they will have advised you where the map is located, but if not please call us for help. Tel 023 9249 9689.

4. USING PT-MAPPER PRO

4.1 Screen Explanation



4.1.1 Tabbed Maps

Fast switching between maps by clicking on tab. Close a map by clicking on the red cross for that map on the tab label.

4.1.2 Layers

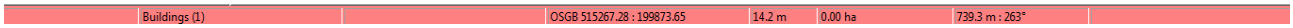
Full details on Layers and Layer Controls are given in Section 5.

- Double-click on Eye symbol to make that layer active. Right click on a layer to add a new layer or change properties.
- Eye denotes that all features on the map on that layer are visible. Click on Eye to make layer non-visible.
- Padlock denotes that all features on the map that are on that layer are locked – they cannot be edited or deleted. Click on Padlock to change status.
- Change ALL Layers control at bottom of LH panel. Other buttons are for selecting Group/Themes or Visible Scale Range modes.

4.1.3 Customisable Toolbars

Right click on tool bar line to add/remove tool icons. Right click again in Toolbar grey area to complete customisation.

4.1.4 Status Bar

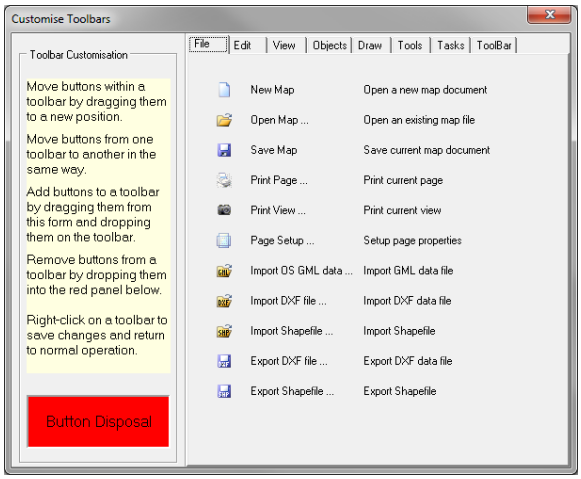


Bottom of screen. From Left to Right, gives information on:

- Layer that the selected object(s) is on and in brackets the number of objects selected.
- The Identifier and Description of selected object if available.
- Full Easting and Northing Ordnance Survey Grid Co-ordinates in metres.
- Length of selected line(s) in chosen units.
- Area of selected polygons in chosen units.
- Distance and bearing of cursor from last click.
- Ordnance Survey Grid Reference for the cursor position.

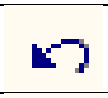
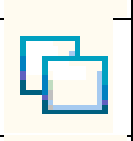
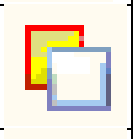
4.2 Menu Lists and Tool Icons

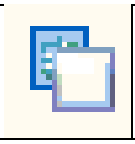
A full set of tools can be viewed by right-clicking anywhere in the grey toolbar area. The tool bars can be fully customised to suit your needs.


Customise Toolbars
Toolbar Customisation
Move buttons within a toolbar by dragging them to a new position.
Move buttons from one toolbar to another in the same way.
Add buttons to a toolbar by dragging them from this form and dropping them on the toolbar.
Remove buttons from a toolbar by dropping them into the red panel below.
Right-click on a toolbar to save changes and return to normal operation.
Button Disposal
File
Edit
View
Objects
Draw
Tools
Tasks
ToolBar
New Map
Open a new map document
Open Map ...
Open an existing map file
Save Map
Save current map document
Print Page ...
Print current page
Print View ...
Print current view
Page Setup ...
Setup page properties
Import OS GML data ...
Import GML data file
Import DXF file ...
Import DXF data file
Import Shapefile ...
Import Shapefile
Export DXF file ...
Export DXF data file
Export Shapefile ...
Export Shapefile

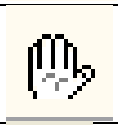
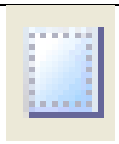
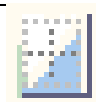
The tool bar icons can be extended into 2 rows if required. Click on View, Options, Layout. The changes will take effect on re-starting PT-Mapper.

4.2.1 Edit

	**Undo**
	Re-do
	**Copy**
	**Paste**
	Paste Here Pastes selected object(s) at cursor position.

	**Paste Google KML** Pastes onto map lines/areas drawn in Google Earth.

4.2.2 View

 	Zoom In. Select, then click on map. **Right click to switch off**. or Select, then drag a rectangle around area of interest. **Right click to switch off.** **Zoom Out.** As for Zoom In. **Fast Zoom In/Out:** Use the Numerical keypad on the RHS of your keyboard, switch the Num Lock on, then use Ctrl and + or Ctrl and – to zoom in or out.
	**Pan** Left click to select the tool, place the cursor on the map, hold the left mouse button down and drag the map.
	View All. PT-Mapper Pro will fit all map objects to the map window. This is the mode that PT-Mapper Pro uses when opening a map, so the map will fill the available screen area.
	**View Page.** Fills the map window area with the page outline. (**Note**: the page outline is only shown when the Print tab is selected.)
	View Selection Provided that its layeris selectable, each object on a map e.g. line, building, text, can be selected by clicking on it. When it is selected it will appear highlighted in red. If you then click on View Selected Object tool, PT-Mapper Pro will fit the selected object(s) to the map window. (See 5.1 on Selecting Objects)
	**Centre Page** Lets you centre the page around the area of interest. Centre the area of interest on the screen, then click on the Centre Page tool.
	Fit to Page Select an object or objects on the map, click on the Fit to Page tool and the Page Outline will immediately provide best fit around the selected object(s).
	Redraw Map. Particularly when on a high degree of Zoom In, it is necessary to refresh the screen display. This can be done by scrolling, zooming out or clicking on this tool.

4.2.3 Tasks

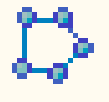
	Text Brings up the Text controls.
	Identify Brings up the ID Control Panel. Lets you associate names/numbers to map objects eg field numbers to field boundaries, so that other software can link to the map.
	Legend Tool Lets you add a legend or key to a map simply by selecting the relevant layers.
	Marker Enables you to select a marker design (tree, gate, stop cock etc) and place it on the map.
	Draw Measured Shape Lets you plot a line of specified length and bearing, draw a circle of specified diameter, area or circumference or draw a rectangle of specified dimensions.
	Title Block Lets you select from a range of pre-defined Title Blocks.
	Schedule Maker Produces a Schedule/list of all parcels on selected layers.
	Street Finder Displays list of all road names. Click on a name and the map is immediately centred at that place.
	PocketGIS Tool Brings up the PocketGIS Link panel that allows maps and associated data capture schemes to be transferred in one go to a mobile device.
	Google Earth Link Select an area or line on the map, then click on the Google Earth tool to launch Google Earth and overlay the selected object(s) on an aerial image. Can also draw on Google Earth and Copy/PasteKML back to the map.

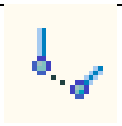
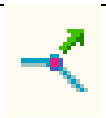
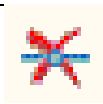
4.2.4 Objects

	De-select. De-selects all objects and switches off all tools i.e. puts the map back into "neutral". Also: Single-right click switches off tools. Double-right click de-selects object(s).
	Move. Click on this tool to select Move, then drag the selected object to where you want it to be. Switch Off: Right click.
	Nail Locks a node to its current position. Used if you want to rotate a building about a corner.
	Slide. Select the object, then this tool, hold the Shift key down and slide the object to its desired position. Do NOT use the mouse buttons – simply slide the mouse.
	Rotate. Select the object, then this tool, hold the Shift key down and rotate the object. Do NOT use the mouse buttons – simply slide the mouse.
	Delete Object. Deletes the selected object(s).
	Group Objects Links objects so that they can be treated as one, Often used when trimming a map.

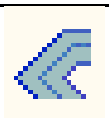
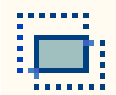
	Ungroup Objects Undoes the grouping so that objects are now treated individually.
	Select Enclosed Selects all available objects (ie those on selectable layers) within the selected polygon.
	Select Neighbours Selects all those selectable objects that touch or cross a selected line or polygon. Often used in connection with trimming a map.
	Move to Layer. Moves the selected object(s) to the selected layer. Useful for when you've drawn objects on the map or added text to the map and then realised that the new objects were on the wrong layer. Switch Off: Single-shot operation, no switch off required.
No icon	**Transform** Displays a panel which lets objects be scaled up or down and/or rotated by a specified angle relative to the main map.

4.2.5 Draw

	Draw Polyline. Select the Draw Polyline tool. As soon as you move the cursor into the map window, it will change to a pencil shape. Single-click to start a line, single-click to change direction, **double-click to terminate** drawing. If you want a line that is exactly parallel to the page edges, hold down the x or the y key of the keyboard while you draw. The Draw Polyline tool also acts as a **Tape Measure**. As you draw, the distance and angle appear on the Status Bar at the bottom of the screen. **Switch Off**: Right click.
	**Draw Polygon.** Select the Draw Polygon tool. As soon as you move the cursor into the map window, it will change to a pencil shape. Single-click to start a shape, single-click to change direction, **double-click to terminate** drawing. **Switch Off**: Right click.
	Draw Rectangle. Select the Draw Rectangle tool. As soon as you move the cursor into the map window, it will change to a pencil shape. Single-click to start a rectangle, single-click to change direction. Single-click to terminate drawing. If you want a rectangle that is exactly parallel to the page edges, hold down the x or the y key of the keyboard while you draw. **Switch Off**: Right click. NB Use the Draw a Measured Shape tool to draw a rectangle of specified dimensions.
	Draw Arrow. Select the tool, position the cursor where you want the tip of the arrow to be then drag to the end of the shaft. Release the mouse button and your arrow will be drawn, automatically scaled.

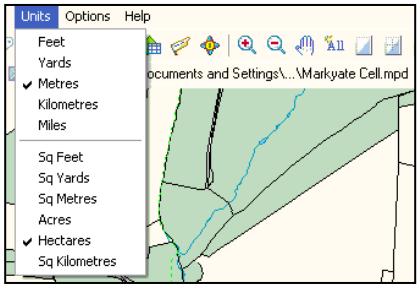
	**Join Lines.** Use for joining two or more lines together. The lines must be end-to-end. See Section 6.6.
	**Drag Node** Use for adjusting position of nodes. Select the object to be modified, select the Drag Node tool, apply the cursor to the node which requires re-positioning and when the cursor changes to a cross-hair, drag the node to the required position. Switch Off: Right click.
	**Delete Node** Select the object to be modified. Select Delete Node tool and apply cursor to a node and when it changes to a cross-hair, click to delete the node. Switch-off: Right click.
	Cut Object Used for cutting lines or polygons e.g. splitting off one area from another. Can cut a line with a line, a line with a polygon, a polygon with a line and a polygon with a polygon. Single-shot operation, no switch off required.

4.2.6 Tools

	**Buffer tool** Enables a buffer to be drawn around a line, around the outside or inside of a boundary.
No icon	**ID Dialogue** Displays the old-style MAPS ID dialogue box.
	Combine Areas Enables two or more polygons e.g. fields or buildings to be combined into one. Original polygons are retained but can be discarded if required.
	**Overlapped Area**. Enables the common area shared by two areas to be separately identified and measured. Useful in measuring area of water buffer areas in fields in farming applications.
	Exclude Area. Enables one area that is contained inside another to be separated.
	Border Area. Creates a polygon of the gap between an "island" and an outer polygon. Very useful for creating "Red-Lines" or headlands for fields.
	Map Cleaner Performs a diagnostic on current map and enables correction of any problems found.
	Map Expert Displays the MAPS "Map Expert" facility.

4.2.7 Units

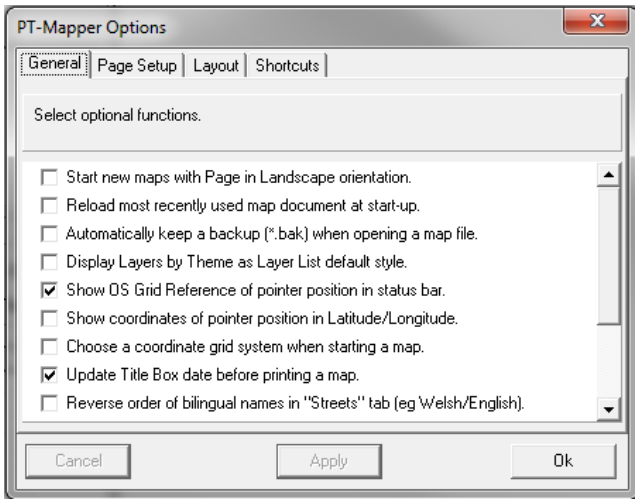
Different units for length and area can be selected:



4.2.8 Options

General

Default settings can be changed using the Options menu. Unless you are an experienced user, it is recommended that you stay with the settings as shown:

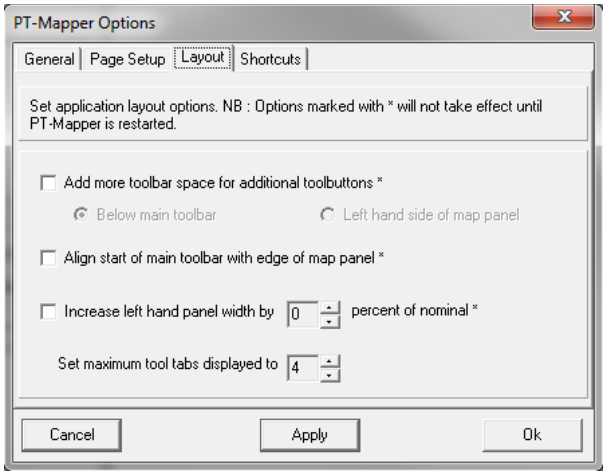

PT-Mapper Options
General
Page Setup
Layout
Shortcuts
Select optional functions.
Start new maps with Page in Landscape orientation.
Reload most recently used map document at start-up.
Automatically keep a backup (*.bak) when opening a map file.
Display Layers by Theme as Layer List default style.
Show OS Grid Reference of pointer position in status bar.
Show coordinates of pointer position in Latitude/Longitude.
Choose a coordinate grid system when starting a map.
Update Title Box date before printing a map.
Reverse order of bilingual names in "Streets" tab (eg Welsh/English).
Cancel
Apply
Ok

Page Set Up

More normally accessed via File, Page Set Up.

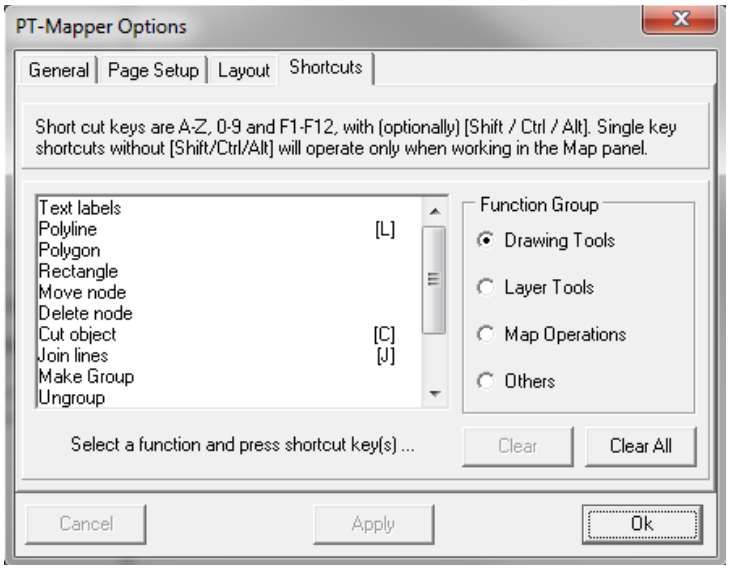
Layout

Enables the Toolbar positioning to be changed and/or extra space made available if more tools are required:


PT-Mapper Options
General
Page Setup
Layout
Shortcuts
Set application layout options. NB : Options marked with * will not take effect until PT-Mapper is restarted.
Add more toolbar space for additional toolbuttons *
Below main toolbar
Left hand side of map panel
Align start of main toolbar with edge of map panel *
Increase left hand panel width by
0
percent of nominal *
Set maximum tool tabs displayed to
4
Cancel
Apply
Ok

Shortcuts

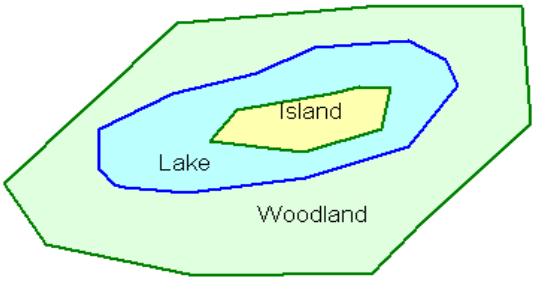
For practiced users, keyboard shortcuts can speed up map editing work. This panel enables shortcuts to be created or reset:



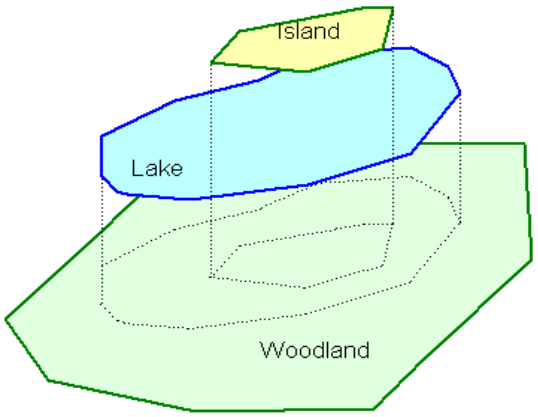
5. LAYERS

5.1 Layer Overview

Maps are constructed in layers of information eg a layer for buildings, one for roads, one for field boundaries etc. These layers can be thought of as a book of transparencies where the pages can be brought to the front of the book or placed further back. Looking down through the book, layers at the front may block the view of layers further back, so the sequence of layers is important.

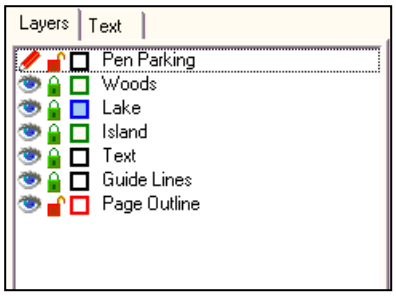


HOW THE MAP APPEARS ON SCREEN AND ON PAPER



HOW THE MAP IS CONSTRUCTED

In PT-Mapper, the list of layers for the above example on the left side of the screen will look like:



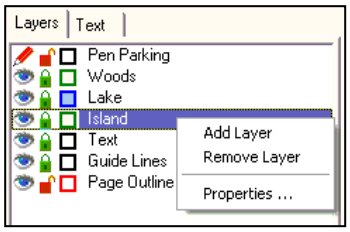
Note that:

- All map features on the same layer will have the same colour and line style according to the layer settings.
- You can have as many layers as you like. Good practice is to put different types of map object on their own layer.
- Layers can be removed, but note that ALL objects on that layer will then be deleted.
- Objects can be moved from one layer to another.
- Layers can be grouped into "Themes" eg a town council may want to show bus shelters, street lamps, waste bins, seats all on different layers, but these could be grouped into one "Assets" theme. Then if the council want a map that doesn't show assets, this theme can be switched off.

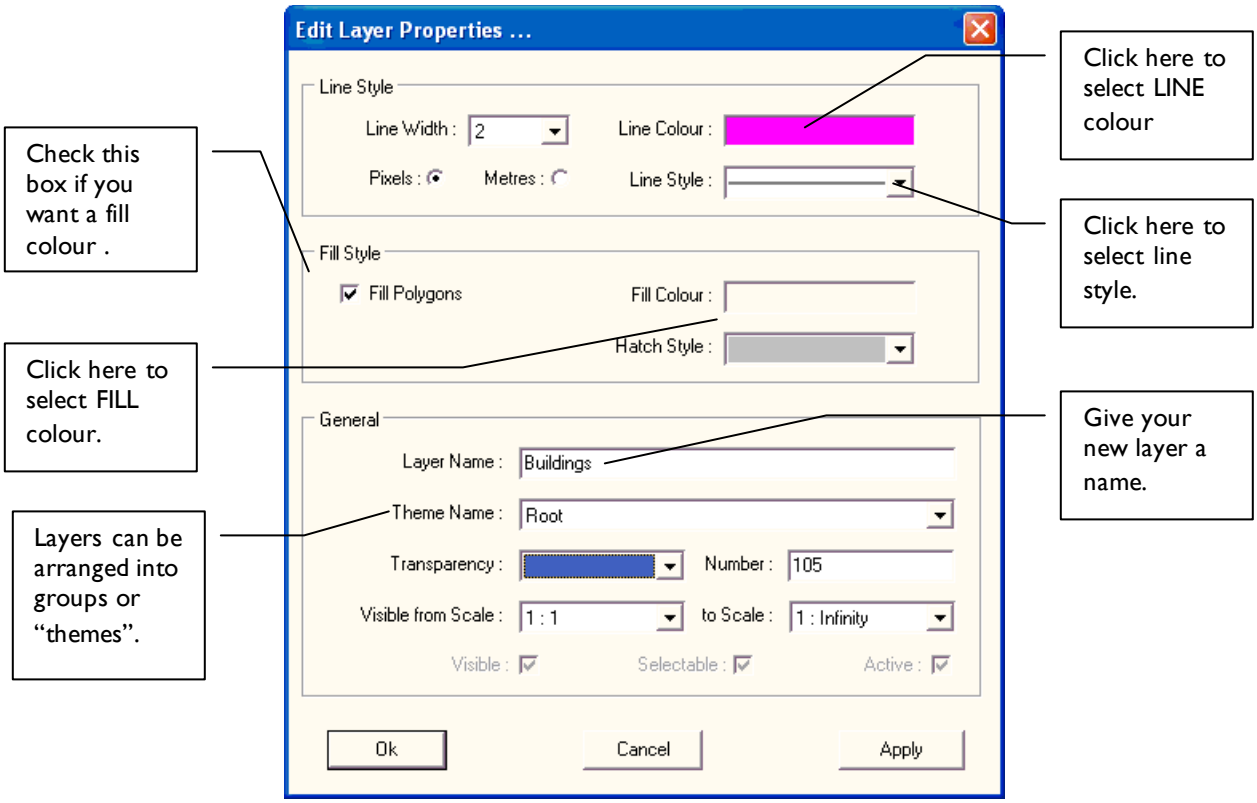
5.2 Setting Up Layers

5.2.1 Add a New Layer

To add a new layer, first decide whereabouts in the list of layers you want the new one to be. The further down the list, the more to the front objects on the new layer will be. Left click on the layer immediately above the desired location to highlight that layer name. Now RIGHT click to get a pop-up menu:

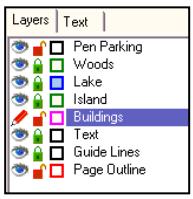


Click on Add layer to get:



Once you have set the properties for your new layer, click on Apply if you wish are adding further layers or click on OK to close the pop-up and return to the main screen.

Your new layer will now be in the list of layers, with a crayon/pen symbol in front of it to denote that anything now drawn or written on the map will go onto this layer.



5.2.2 The "Active" Layer

PT-Mapper needs to know which layer to use if something is added to the map. To do this, one layer is designated the "active" layer. To make a layer the Active layer, double click on the Eye symbol in front of the layer name. The "Eye" will change to a pencil symbol.

The Active layer can also be called the Current layer, the Working layer or the Target layer.

5.2.3 Changing the Layer Order

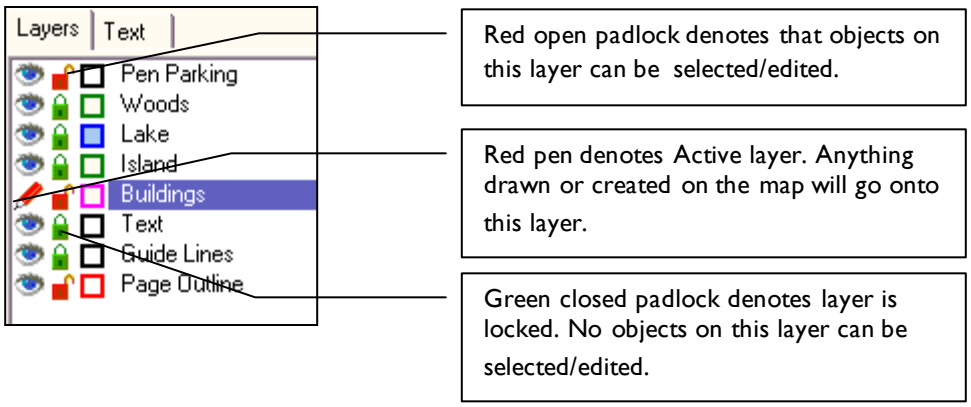
To re-position a layer in the list of layers, for example to ensure that text will be displayed on top of areas that have a fill colour, simply drag and drop the layer name to the desired position.

5.2.4 Making Objects on a Layer Visible or Not

A great benefit of digital mapping is that objects on a map can be temporarily hidden. For example, a farmer may have layers for the various crops and he may have also drawn on his map the location of water pipes and electricity cables. If a cropping plan is required, clutter on the map can be reduced by making the water and electricity layers non-visible. Layers can be made Visible/Non-visible simply by clicking on the Eye symbol to the left of the layer name.

5.2.5 Making Objects on a Layer Selectable or Not

Another great benefit of digital mapping is that maps can be easily modified and updated. However, it can also be easy to do this accidentally so good practice is to lock all those layers whose objects do not need to be edited. Lock a layer by clicking on the Padlock symbol to the left of the layer name.


Layers
Text
Pen Parking
Woods
Lake
Island
Buildings
Text
Guide Lines
Page Outline
Red open padlock denotes that objects on this layer can be selected/edited.
Red pen denotes Active layer. Anything drawn or created on the map will go onto this layer.
Green closed padlock denotes layer is locked. No objects on this layer can be selected/edited.

5.2.6 Pen Parking Layer

It is good practice to set ALL layers to the locked position before saving a map. This prevents moving or deleting objects by accident. Because objects on the Active layer must be both Visible and Selectable, we need to assign an empty layer as the Active layer – a "parking place" for the pen symbol so that all other layers can be locked.

Try to avoid using the Pen Parking layer for any other purpose.

5.2.7 Set All Layers

PT-Mapper has tools available to facilitate locking all layers in one go. At the bottom of the Layer panel you will see:

Clicking on the appropriate symbol will set all layers to that state EXCEPT the Active layer. You can return to the previous status by clicking on the Return arrow.

5.2.8 Moving an Object/Objects to Another Layer

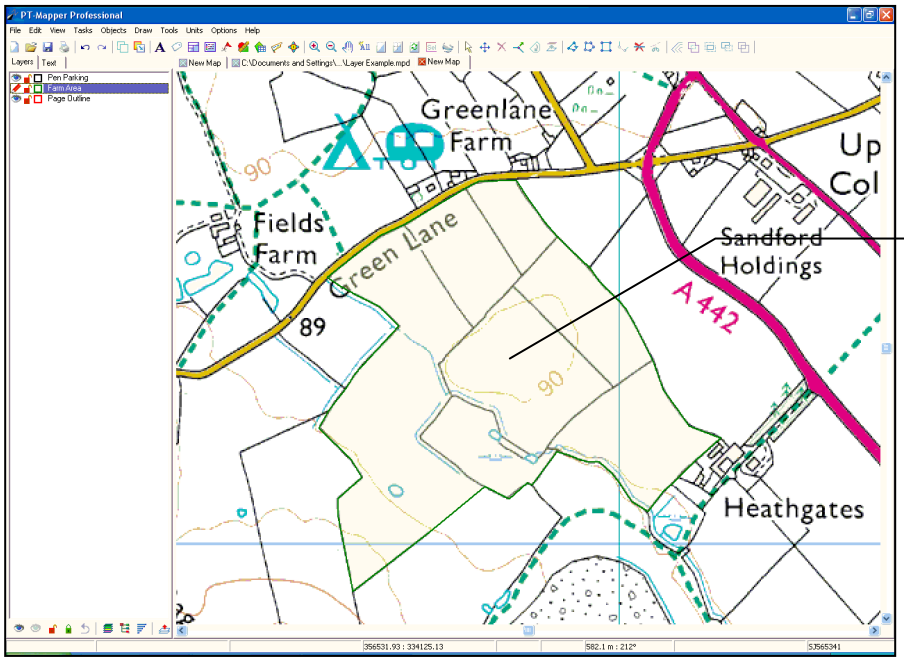
It's inevitable that you will sometimes want to change an object from one layer to another. This is easy. Select the object, make the receiving layer the Current layer by clicking on the layer name, then select the Move to Layer tool . The object will now be on the desired layer.

5.2.9 Edit the Layer Name

Click on the Layer name to highlight the text. Then right click, select Properties and edit the layer name there.

5.2.10 Transparency

If a shape is drawn on a layer that has a solid colour fill, all objects sitting beneath that layer will be obscured. This can be overcome by making the layer with the shape on it translucent. Move the slider bar to the right in the Layer Properties panel to increase the level of transparency.



Transparency set to 70% in Layer Properties.

5.2.11 Layer Number

In the Layer Properties pop-up, a Layer Number is given for each layer. These are automatically assigned by the program and they only become important when you want to copy and paste objects from one map to another. Suppose that the Buildings layer on one map has a Layer Number of 30 and that the receiving map already has a Layer Number 30 that has been assigned to Water Courses. Copying and pasting a building to the second map will place the original building on the Water Courses layer.

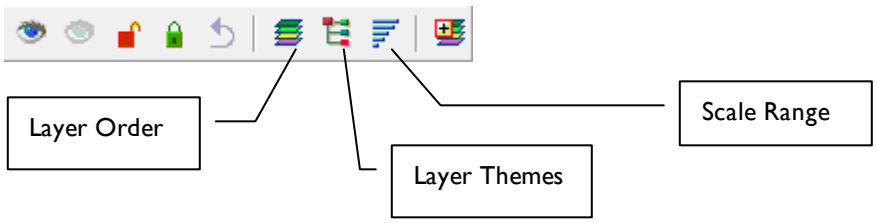
This can be avoided by ensuring that layers which contain objects for copying/pasting have the same number as the receiving map.

5.3 Layer Themes/Layer Groups

PT-Mapper defaults to showing all the layers in Layer Order mode. However, it is possible to group sets of layers together. For example all tenancy layers could be grouped, wayleaves and easements could make up another group, field cropping another etc. This can make the structure of a map containing a large number of layers much easier to

follow. Each group can be treated as a single layer i.e. all the layers within that group can be switched on or off at once.

To switch between modes, click on the Mode Selection icons at the bottom of the Layers panel:

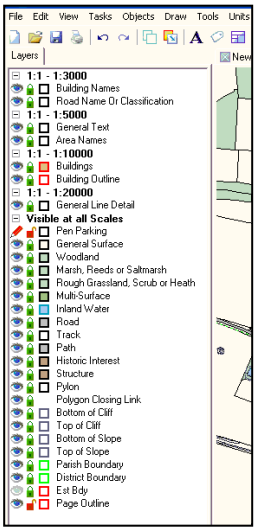


To group a set of layers into a Theme, click on the Themed Layers icon. Then right click on any Theme heading and select Add Theme. Now drag and drop the layers onto that Theme.

5.4 Layer Scale Ranges

On large maps (in file size terms), it is better to set some layers so that they only become visible when you have zoomed in beyond a certain scale. This leads to faster operation because the computer doesn't have to spend time re-drawing map features that can only be seen at the larger scales – features such as text.

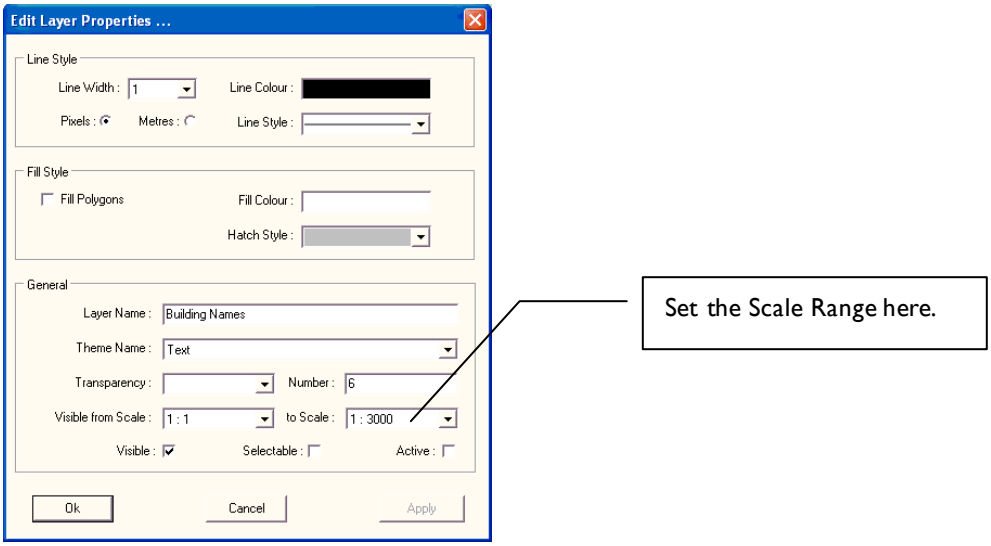
Click on the Scale Ranges icon at the bottom of the Layers panel. A typical OS MasterMap will present this type of display:



In this example, Building and Road Names will only become visible when the zoom in gives an on-screen scale of 1:3000 or greater.

N.B. The Scale Range settings will also apply when printing. So in the above example, if the map is printed at a scale of 1:5000, Building Names and Road Names will not show.

Scale Ranges have to be set layer-by-layer using the Layer Properties panel:



5.5 Selecting Objects on a Map

For any object to be selected (so that it can be moved, changed, copied), the layer that it is on must be set to Selectable i.e. the padlock symbol must be set on Unlocked.

Good practice is to make ALL layers non-selectable (padlock closed) except the one layer you need to be selectable. This avoids accidental editing of other objects.

5.5.1 Selecting Areas

Make sure its **layer is selectable**, then click inside the area or at a node on the boundary.

Problems?

a) If the cursor is inside one polygon which is inside another e.g. a pond within a field and both layers are selectable, PT-Mapper Pro will select first one, then the other in cyclic rotation. When selected, the nodes will show and the line will be red.

b) If you click inside an area and it doesn't select, first check that its layer is selectable. If the layer is selectable, click at a node on a boundary (you will see a cross-hair when the cursor is over a node). If the boundary line selects, check that an area is given on the Status Bar at the bottom of the screen. If no area is shown, it's probably because the boundary line is not a closed polygon.

5.5.2 Selecting Lines

Make sure its layer is selectable. Lines can only be selected where there is a node, so any corner or bend will do or the extreme ends of the line. To be sure that the cursor sits over a node, move the cursor slowly along the line – it will change to a cross-hair when it is over a node.

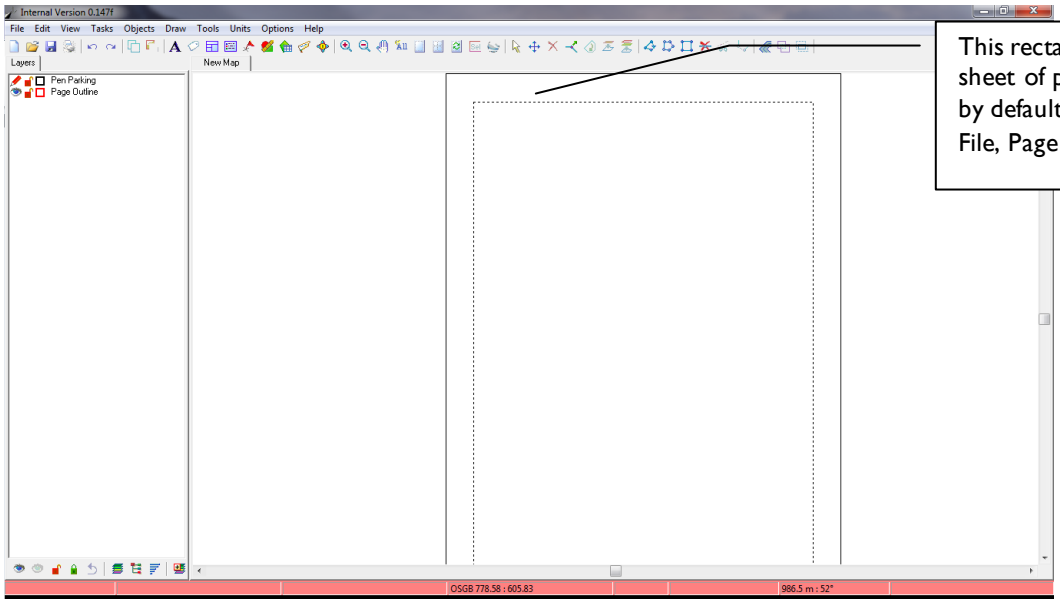
5.5.3 Selecting Text

Make sure the text layer is selectable, then click on it to select it. When selected, a small black square will appear in each corner and the text will be coloured red.

6. BASIC OPERATIONS

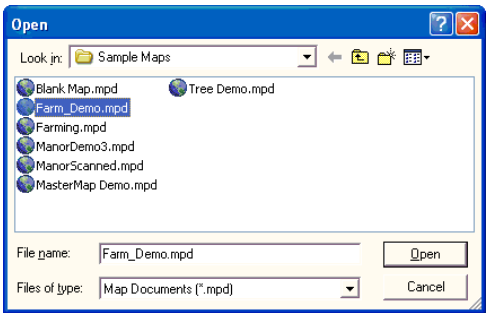
6.1 Open a Map

When PT-Mapper first opens up, you will see a blank page.



Important: PT-Mapper operates a continuous print preview. Whatever sits inside the margin of the page (shown by a dotted line within the page outline) is what will come out on the printer provided that the correct size paper is in the printer. See the section on Printing.

To open a demo map, go to File, Open and browse to My Documents\Pear Technology\PT-Mapper\Sample Maps and choose one of those available:



To open your own map, go to File, Open and browse to where your map has been saved. This map must be in the Pear .mpd format. If it isn't, you will need to Import it – see Section 6.2.

6.2 Import a Map from CAD or Other Software

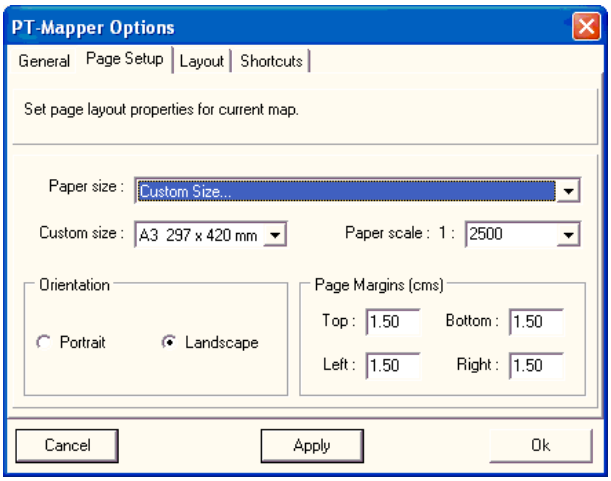
Go to File, New to create a new blank map window.

Go to File, Import and select the format of the map or drawing that you wish to import.

Important: If you wish to import a CAD drawing, it must be in .DXF format, not .DWG. If you only have the latter, you can ask your supplier to re-issue in DXF or you can send the DWG file to Pear technology, who will convert it for you usually without charge.

6.3Page Set Up and Scaling

PT-Mapper allows you to work with any paper size at any scale. It defaults to A4, but if you wish to change to A3 or larger, then go to File, Page Set Up and select the required paper size. If your chosen printer does not have A3 capability, you will have to choose Custome Size and then select from the drop-down list:



Having chosen your paper size, the page outline may still not cover the required area on the map. Therefore, go back to File, Page Set Up and make the scale smaller i.e. a larger number. The drop-down list of scales gives the most commonly used scales, but you can overwrite the value in the scale box with any figure.

Important: If you change the paper size or the scale, the Page Outline will need to be re-centred over the appropriate area of the map. See Centre Page in the next section.

6.4 Navigate around the Map

6.4.1 Zoom

There are several ways to zoom in/out on a map:

Left click on the Zoom tool, or , position the cursor on the map and repeatedly left click to zoom in or out, centred at that point.
Right click to de-select the tool.

Click on the Zoom In tool, then drag a rectangle around the area you wish to zoom in on.
Right click to de-select.

Use the + and – keys on the Numerical Keypad section of the keyboard to quickly zoom in or out.

Use the mouse wheel (depending on the set up for the mouse).

6.4.2 Pan

Left click on the Pan tool , position the cursor on the map and repeatedly drag and drop the map around the screen.

6.4.3 View Page

Click on the View Page tool and the Page Outline will fill the screen.

6.4.4 View All Objects

Click on the View All tool and the whole map will fill the screen.

6.4.5 Scroll

The map can be scrolled left/right or up/down by using the scroll bars in the PT-Mapper screen. Alternatively, if you have a full-sized keyboard, the scroll keys on the number 2,4, 6, 8 keys can also be used.

6.4.6 View Selected Object

If you select a boundary on the map so that it appears red and the "nodes" are visible, the click on View Selected Objects

, the selected object, or objects, will fill the available screen area.

6.4.7 Fit Page to Selected Object(s)

Select a boundary or line on the map, click on the Fit to Page tool and the Page Outline will just give a best fit around the selected object(s).

6.4.8 Centre Page

Zoom in around the area of interest on the map so that it is centred on the screen. Click on the Centre Page tool and the Page Outline will automatically centre around on the view. Note that the page outline may not be visible, depending on the scale that has been set in File, Page Set Up.

6.5 Selecting Objects on the Map

IMPORTANT

Good practice is to lock all layers except the few that are needed. This minimises the risk of accidentally moving or deleting map features.

Make sure that the layer(s) for the objects you wish to select are "unlocked" i.e. selectable.

6.5.1 Point Objects

Examples are tree symbols, markers: position the cursor over the object to get a cross-hair and left click. The object will be highlighted and can now be edited using the Text tool , moved or deleted .

6.5.2 Lines

Lines can only by selected where there is a node. Position the cursor at either end of the line, or on a corner, to get a crosshair and left click. The line will be highlighted and can now be edited using the Move Node tool , moved or deleted .

6.5.3 Polygons

Polygons can be selected by left-clicking inside them or by clicking on a boundary node (get the cross-hair). The polygon will be highlighted and can now be edited using the Move Node tool , moved or deleted .

If you click inside a polygon that sits within a larger polygon (eg the map frame), PT-Mapper will select first the polygon whose layer is higher up the list. If this is not the correct polygon, click again and the next polygon will be selected. To avoid unwanted polygons being selected, make their layers locked (unselectable).

6.5.4 Multi-selection

To select multiple map features, hold down the Ctrl key on the keyboard and left click on each object as above.

Alternatively, make sure that only the layers of the required objects are unlocked. Now drag (drag, not draw) a rectangle that comfortably surrounds all the objects you wish to edit, move or delete. Drag a rectangle by imagining the top left corner of a "box" that surrounds the objects, position the cursor at that point, hold down the left mouse button and drag across and down. You will see a faint rectangle overlaid on the map as you drag. On releasing the button, all selectable objects contained within the dragged area will be selected.

6.6 Draw on the Map

6.6.1 Draw Line

Select the Draw Polyline tool . As soon as you move the cursor into the map window, it will change to a pencil shape. Single-click to start a line, single-click to change direction, **double-click to terminate** drawing.
Right click to switch off the Draw.

If you want a line that is exactly parallel to the page edges, hold down the x or the y key of the keyboard while you draw.

The Draw Polyline tool also acts as a **Tape Measure**. As you draw, the distance and angle appear on the Status Bar at the bottom of the screen.

Switch Off: Right click.

6.6.2 Joining Lines

1. Make sure that the required layers are visible and selectable.
2. Position the cursor on the end of one line so that you get a cross-hair, then click to select the line.
3. Select the Join Lines tool , position the cursor on the end of the line you wish to join to, get a cross-hair and left click. The two lines will join.
4. Note that if the two original lines are on the same layer, the joined line will also be on that same layer. If the two original lines were on different layers, the joined line will be placed on the current layer.

6.6.3 Joining Line Segments

Although a line may visually appear to be continuous, it can be made of separate segments. To make two segments a continuous line, hold down the Ctrl key, select both lines by clicking at an end or at a bend (where there is a node), then click on the Join Lines button.

6.6.4 Cutting a Line

Select the line by clicking at an end or at a node, then select the Cut tool and apply the cursor to the node at which you wish to cut. When you get a cross-hair, left click and the line will now be in two segments.

6.6.5 Joining Lines to make a Polygon

This facility is used when a **single** polyline needs to be transformed into a closed polygon.

1. Make the appropriate layer the current layer by clicking on the layer name. Make all other layers non-selectable.
2. Hold down the Ctrl key and select all the lines that make up the boundary.
3. Click on the Join Lines tool .

6.6.6 Draw Polygon

Select the Draw Polygon tool . As soon as you move the cursor into the map window, it will change to a pencil shape. Single-click to start a shape, single-click to change direction, **double-click to terminate** drawing. Note that PT-Mapper always joins the first point to the last point drawn, so that it is always a polygon. The area will be shown on the Status Bar at the bottom of the screen.

Switch Off: Right click.

6.6.7 Draw Rectangle

Select the Draw Rectangle tool . As soon as you move the cursor into the map window, it will change to a pencil shape. Single-click to start a rectangle, single-click to at the next corner, then keeping the mouse button depressed, drag down and click at the third corner.

Single-click to terminate drawing.

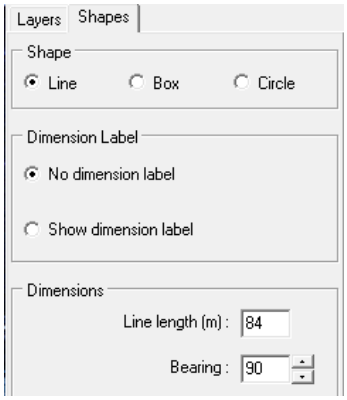
If you want a rectangle that is exactly parallel to the page edges, hold down the x or the y key of the keyboard while you draw.

Switch Off: Right click.

NB Use the Draw a Measured Shape tool to draw a rectangle of specified dimensions.

6.6.8 Draw Measured Shape – Circle, Box, or Line

This tool enables you to draw a line of a specified length and angle, draw a rectangle of specified dimensions or draw a circle of specified dimensions. Click on the Draw Measured Shape tool to get this control panel:



In each case, specify the required dimensions, select the Draw Shape tool and then click at the required start point on the map and PT-Mapper Pro will draw the object you have defined. Note that the object will be drawn on the Current layer.

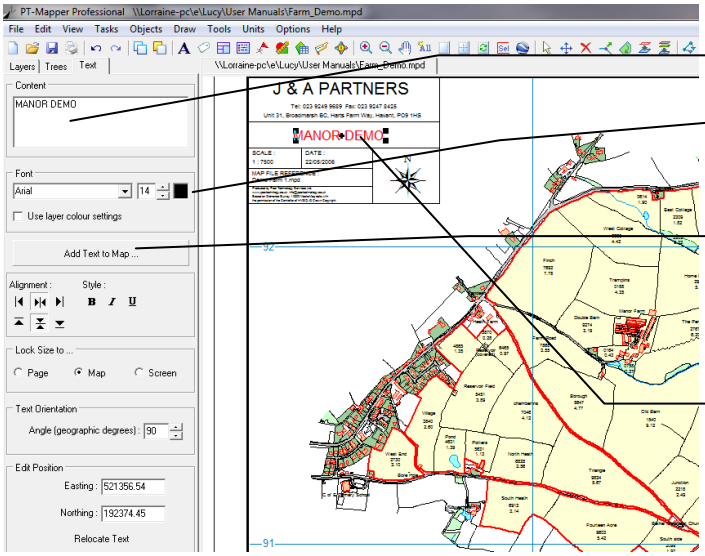
6.6.9 Draw Arrow

Select the Draw Arrow tool , position the cursor where you want the tip of the arrow to be then drag to the end of the shaft. Release the mouse button and your arrow will be drawn, automatically scaled.

6.7 *Text*

6.7.1 Adding Text to a Map

Text can be added to the map in any font type that is installed on the computer. Font size and colour can also be chosen, and text can be rotated so that it lines up with a road or stream etc. Selecting the Text tool will give you this control panel:



Type your text in here.

Set Text colour.

Having entered your text, click on the Add\Text button, then click on the map where you want the text to be.

Text appears on map. While it is highlighted (in red), the control panel can be used to edit/adjust the text.

Re-position the text with the Move tool .

6.7.2 Edit Text

Set all layers to non-selectable, then make the relevant text layer selectable, select the text by clicking inside it, then select the text tool to make the changes.

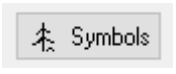
6.7.3 Move Text

Set all layers to non-selectable, then make the relevant text layer selectable, select the text by clicking inside it, then use the Move tool or select the Slide tool , hold down the Shift key on the keyboard and slide the text to its new position by moving the mouse – do NOT use the mouse buttons when using the Slide tool.

6.7.4 Rotate Text

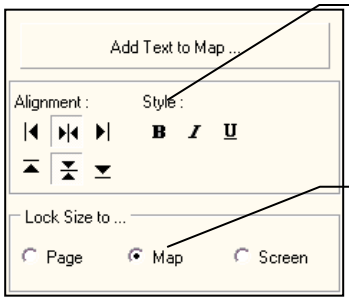
Set all layers to non-selectable, then make the relevant text layer selectable, select the text by clicking inside it, then select the Rotate tool , hold down the **Shift** key on the keyboard, and simply rotate the selected text by moving the mouse – do NOT use the mouse buttons.

6.7.5 Add a symbol

To add a Map symbol, click on the 

button.

6.7.6 Text Alignment



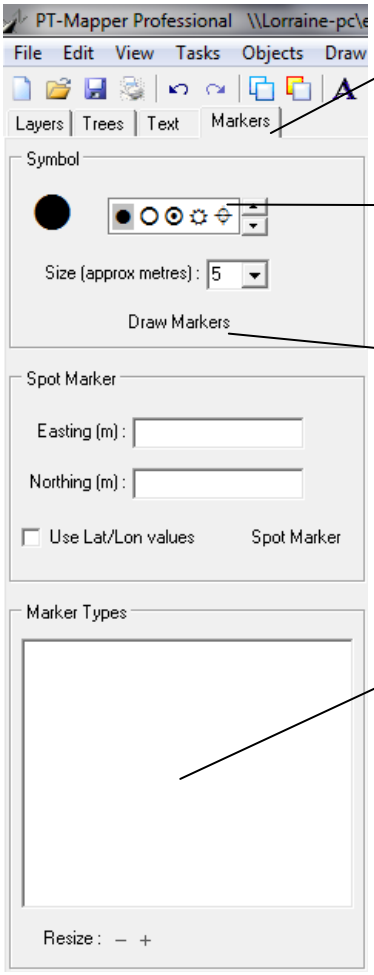
The text will be aligned to the top left, centre/centre, top centre etc. according to these settings.

Text size can be locked to the map, page or screen regardless of scale. EG
Locked to Map means that the text will stay the same size relative to other map features, regardless of scale used.

Locked to Page means the text stays the same size relative to the paper size.

6.8 Markers

The Place Marker tool gives this control panel:



Click here to change marker colour.

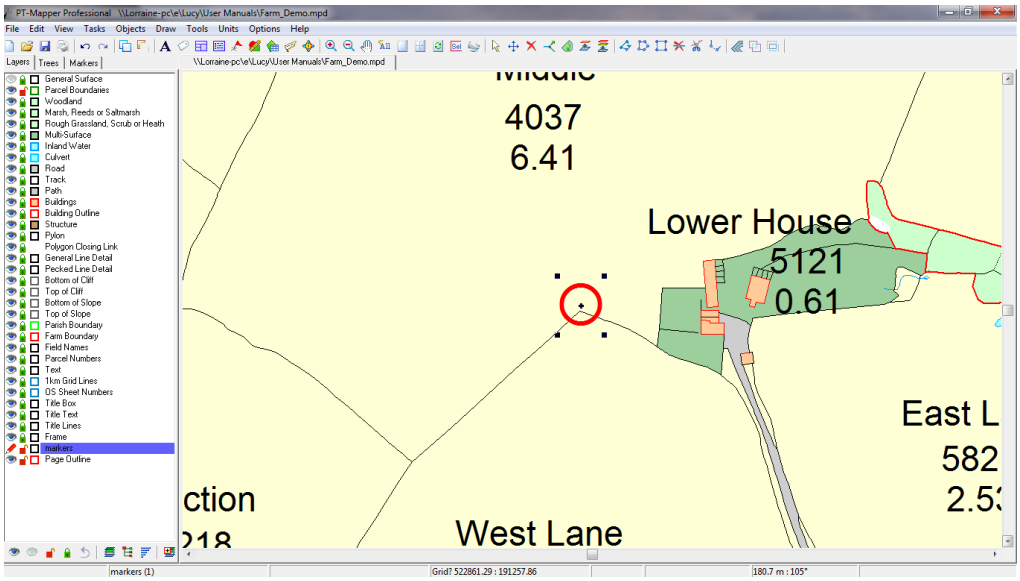
Size of marker in metres. Adjust up or down as required.

Enter co-ordinates here, then click on Plot to place marker at precise location.

Each time you create a marker on a different layer, the layer name will appear here. Select the Marker Layer, then click on Up/Down arrows to adjust size of ALL markers in one go.

6.8.1 Place a Marker

Make an appropriate layer the Current layer (crayon in front of layer name).
Choose one of the available markers by clicking on it.
Change the colour if necessary.
Set the size (can be adjusted later).
Click on the Draw Markers button and click on the map where you wish the centre point of the marker to be.



By creating markers for different features on separate map layers, PT-Mapper can provide a list of all the marker types on a map (bottom section of panel).

To adjust the size of all markers in a given category, click on the marker name in this box and click on the + or – Adjustment.

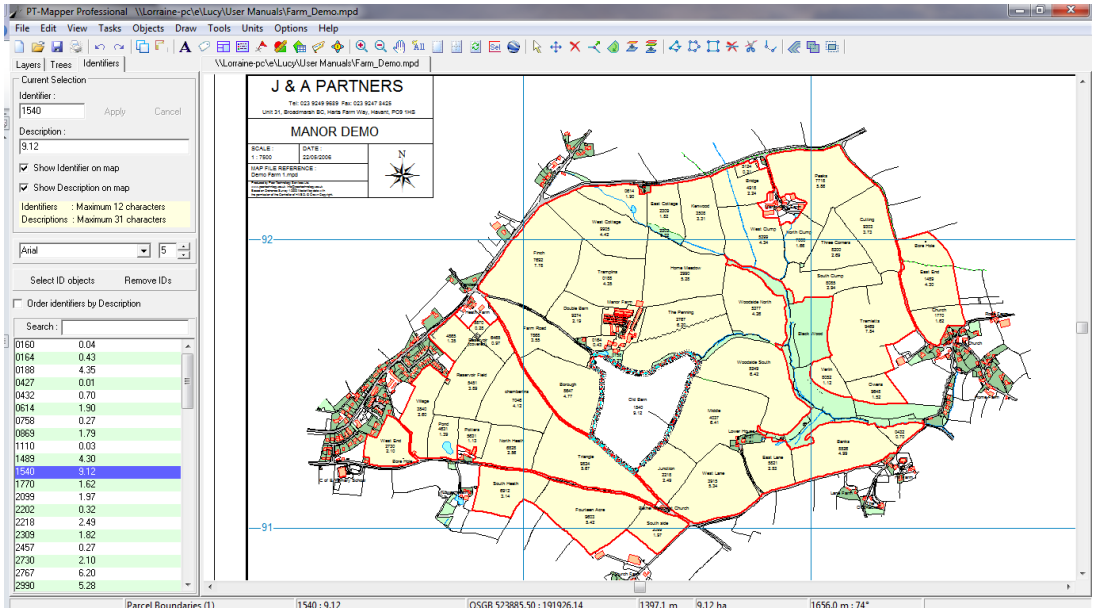
Markers can be placed at specified co-ordinates using the middle section of the panel.

6.9 Identifiers

IMPORTANT! This section is essential if you wish to link your map now or at some stage in the future to a spreadsheet, a database programme or to use your map in conjunction with PT-Maplink.

6.9.1 View Existing Identifiers

Open the MasterMap Demo map found in My Documents\Pear Technology\PTMapper\Sample Maps and click on the Identifier tool to get this screen:



The Identifiers are more than just labels – they are associated directly with the map feature so that, for example, if a bench seat is removed from the map, the ID will also be removed automatically.

It is possible to associate two "identifiers" with an object on the map. In this case, the main ID is the Play Area and the second is used to give the type of play equipment.

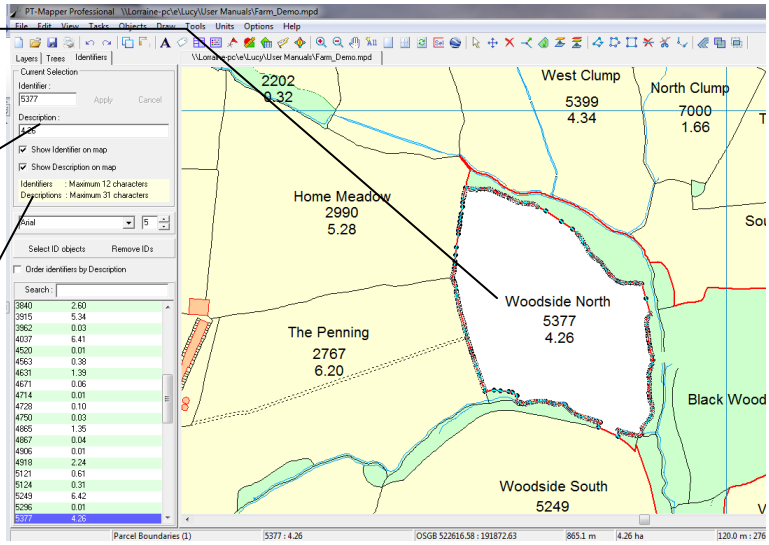
6.9.2 Add an Identifier

Make the layer for the Identifier and Description the Current layer.

Selected object.

Type in the ID of the selected object or edit existing ID.

Check these boxes to show the ID and Description on the map.



Enter the ID and Description (if required) into the appropriate boxes, check the boxes if you wish to have them visible on the map and then click on the Apply button. If displayed on the map, the ID and description will be placed on the current layer.

IMPORTANT
The Identifier can be a maximum of 12 alpha-numeric characters.
The Description can be a maximum of 30 alpha-numeric characters.
Identifiers must be unique on the map.

6.9.3 Edit an Identifier or Description

Select the object on the map, click on the ID tool and the ID will be shown in the list box. Change the ID, click OK and on de-selecting the object, the map will be automatically updated.

6.9.4 Deleting an Identifier

Select the object on the map, switch to **ID's** Mode and the ID will be shown in the list box. Click on the Remove button, and on de-selecting the object, the map will be automatically updated.

6.9.5 Locate

The Identifiers can be used to locate areas or objects on a map. Enter the ID into the search box – as you type, PT-Mapper will display the object with that ID.

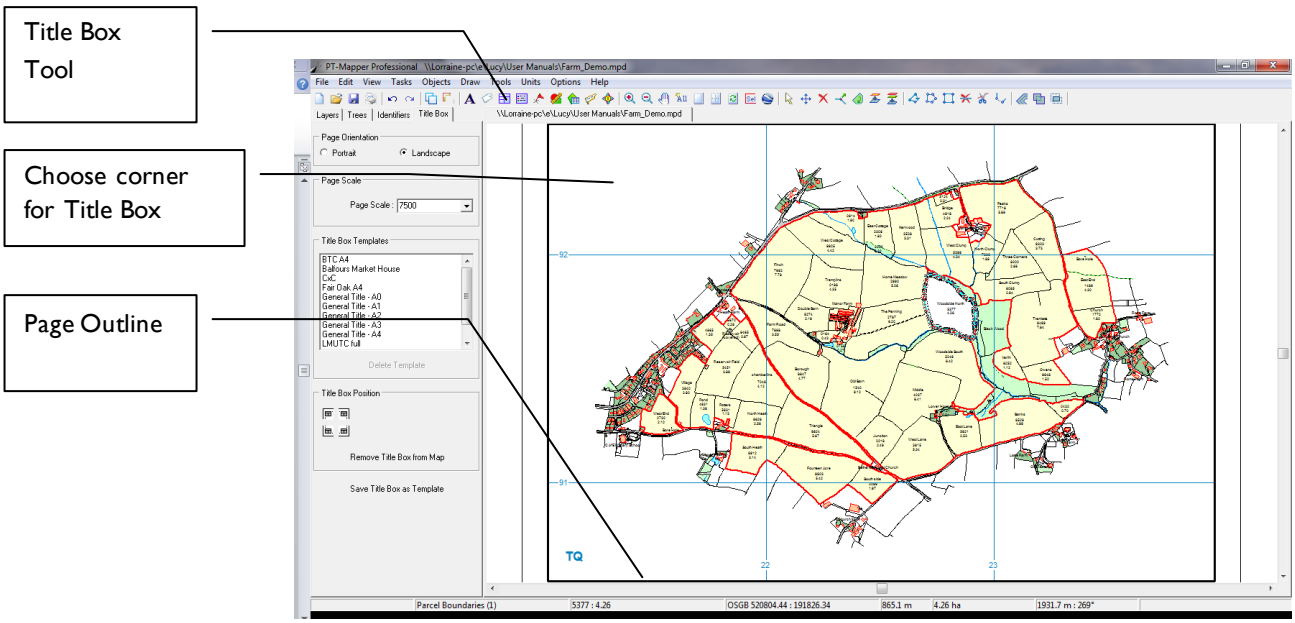
6.9.6 Select a Number of Objects by their ID's

In Identifier mode, multi-select the relevant ID's by either holding down the Ctrl key on the keyboard and clicking on each wanted ID or, if in a block of ID's, click on the top one in the list, hold down the Shift key and click on the bottom.

With the ID's now selected, click on the Select ID Objects button in the Identifier panel.

6.10 Title Blocks

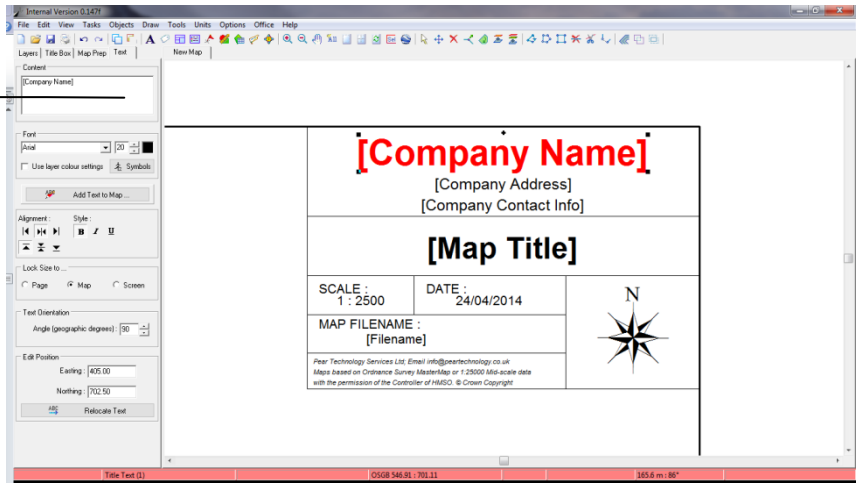
This facility automatically places a title block on your map. The scale, date, compass rose and Copyright statement will automatically be included within the title block. Click on the Title Block tool to bring up the Control Panel:



Pre-formatted Title Boxes are set up for A4, A3, A2, A1, A0 paper. Select one of these, then click on the icon beneath to choose the corner of page in which you wish to position it.

To add your own name, map name etc., first make all other layers except the Title Text layer non-selectable, then click on the text in the Title Block to be edited. This will appear in the Text editing panel on the left and can be overwritten with the desired wording. Initially, just set the text in the top section to give your company name, address and contact telephone numbers, then switch back to Titles Mode in the LH panel and click on the "Save Title Box as Template" button. These settings will be saved as part of the template.

As you type into the text editing box in the Control Panel, the text changes on screen.



You can give this template a name eg "My Company A4". On saving, this name will be added to the list of title blocks so that you can select this template each time you wish to place a title box onto an A4 map. You will need to save different templates for different sizes of paper.

Logos

You can insert a logo/crest in your title box but they must be in BMP or TIF format.
If your logo is only available as a jpg file, open it in Microsoft Paint and re-save it as a high resolution BMP or TIF file.

Take a map with an existing Title Box.

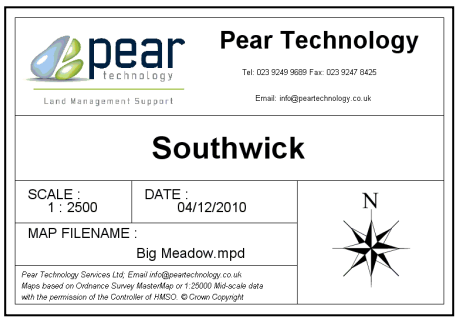
Edit the box to make room for the logo.

Import the logo (File, Import, Raster and browse to your logo). This will appear over the map and may be far too large. Use the Move Node tool to re-size it by dragging the corners in and then make the Title Logo layer the Current layer and move the selected logo to this layer using the Move to Layer tool .

Further adjust the logo size to fit the space available.

Save the Title Box as a template.

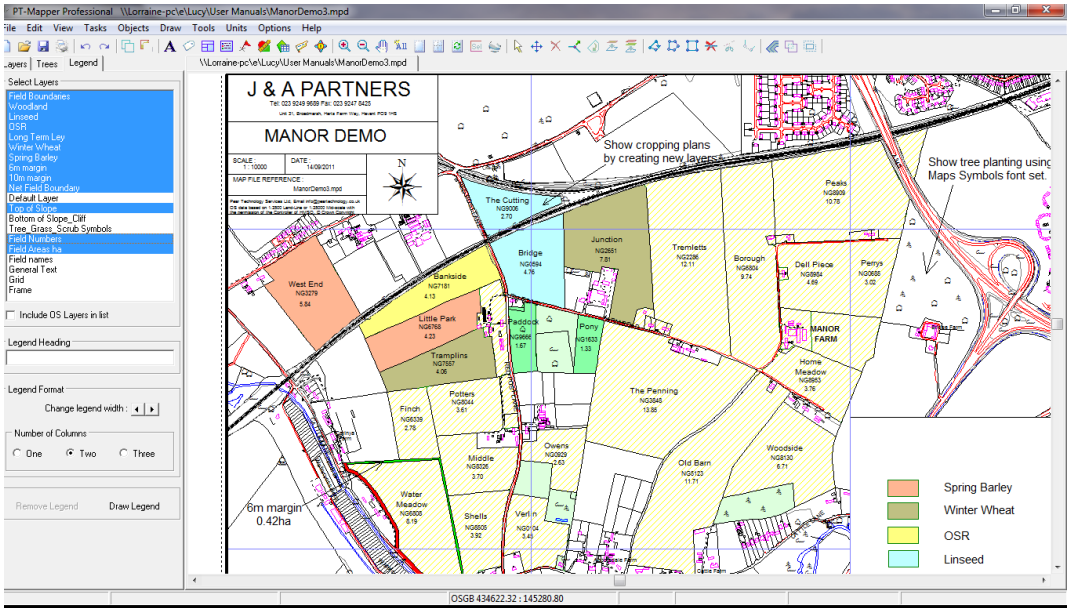
Use the Move Node and Move Tools to size and position the logo within the Title Block. Save as a new template.
Example:



6.11 Legend Creation Tool

PT-Mapper includes a tool for automatically creating legends on a map. Click on the tool to bring up the Legend control panel. Multi-select (hold keyboard Ctrl down) to select those layers for which a legend is required.

Note that only those layers which have a fill colour will be listed. The tool will not create a legend or key for lines or polygons without fill colours.



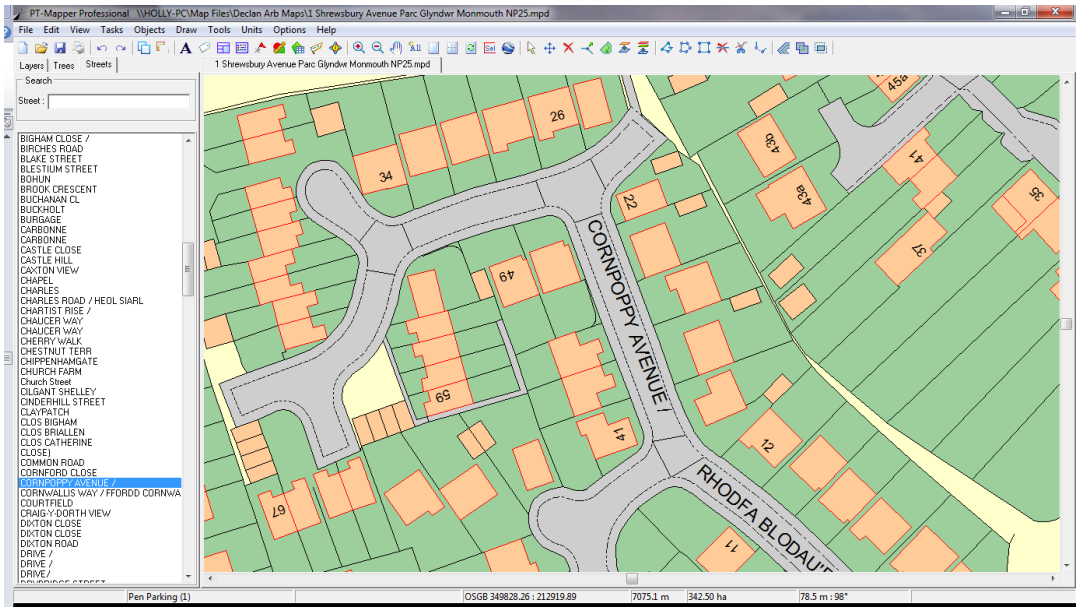
Move Legend box: Switch to the Layers tab and make the Legend layer selectable (unlocked).

Click on a corner of the Legend box to select it, then use the Move tool to drag and drop the legend to its new position.

Legends can be created as 1, 2 or 3 columns and the width adjusted using the up/down counter.

6.12 Street Finder

On maps based on OS MasterMap data (any map supplied by Pear since October 2008 will apply), the Street Gazetteer tool allows you to select a road or street name from the list presented and zoom in to that road:

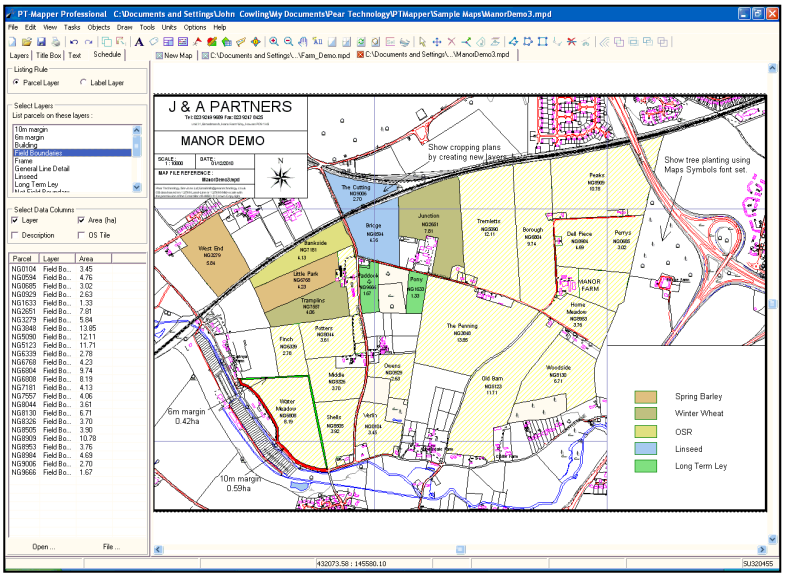


6.13 Schedule Maker

This facility enables you to quickly list all those objects with Identifiers on a particular layer, so if you select TPO Trees, for example, you will see a list of all your TPO Trees. Or if you have managed woodlands with assigned compartment numbers, you can list those compartments, the OS Sheet Number, the area in hectares and the area in acres. The list can be saved as a text file (.csv format) and opened in Excel for further editing.

6.13.1 Display a Schedule

Select the Schedule tool to get this screen:



The layers are listed in alphabetical order. Choose the Field Boundaries layer and it will shift into the right hand box, with all the parcel numbers showing below. Position the cursor over any parcel number or ID in the list and that area will immediately be highlighted and centred on the map.

Now click on the layer name "Field Boundaries" in the right hand box and the layer will be restored to the main list. Select the layer Spring Barley and you should see 2 fields listed.

6.13.2 Save the Schedule

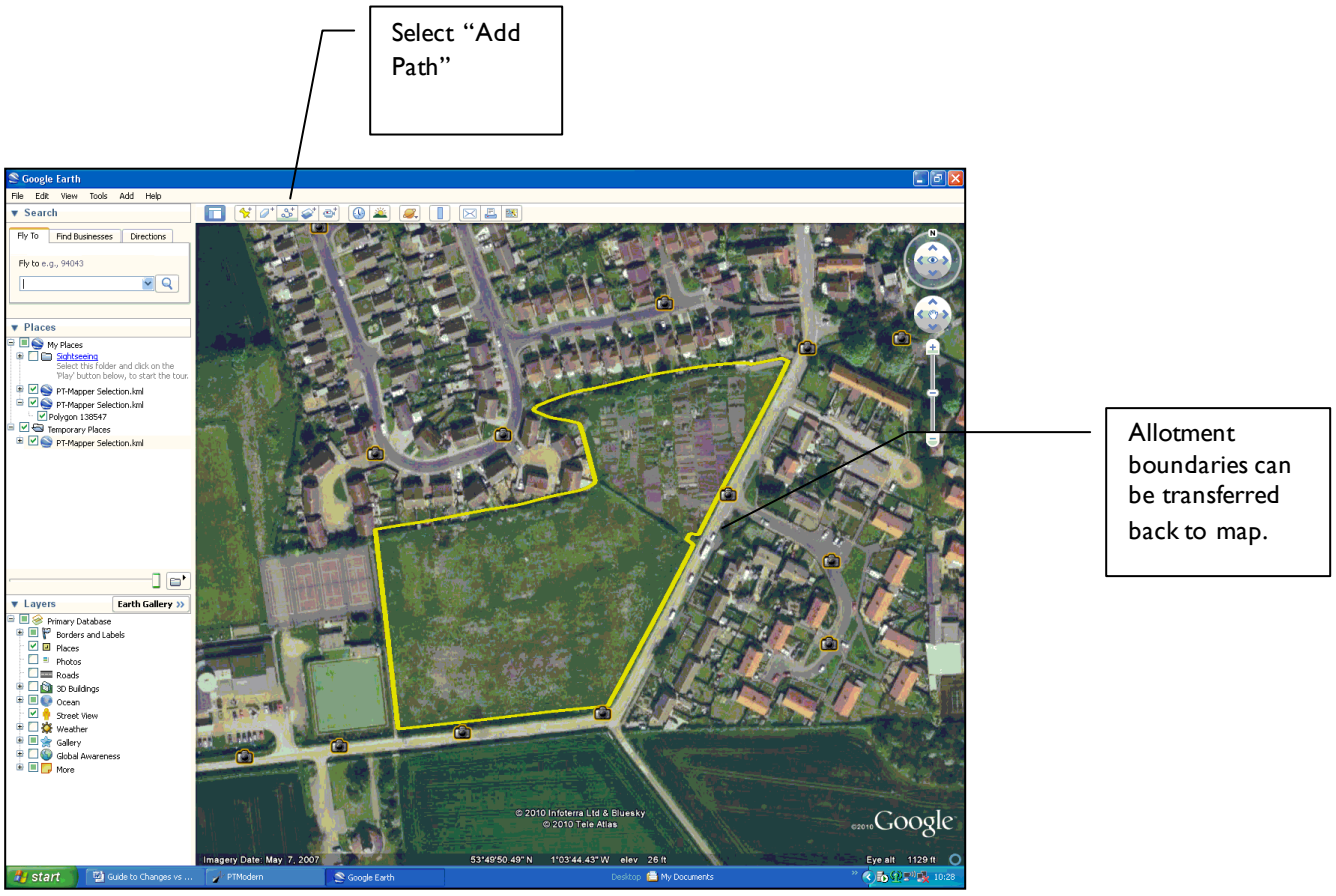
When you have the required list, click on the File button at the bottom of the left hand panel and save the file. You can now switch to Excel and open it – but remember to select Files of Type Text (.csv) in Excel.

6.14 Google Earth Link

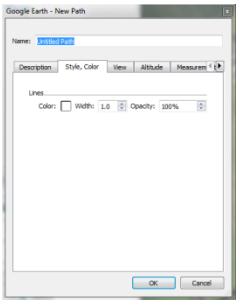
To install Google Earth go to http://www.earth.google.co.uk and select Downloads. Installation is straightforward and only takes 3 - 4 minutes.

In PT-Mapper, select the area, line or object then click on the Google Earth icon above the map. PT-Mapper will launch Google Earth and take you to that very place with the boundary or line that you selected superimposed on the aerial image.

In Google Earth, you can use the Plot Area or Plot Line tools to draw on the aerial image.

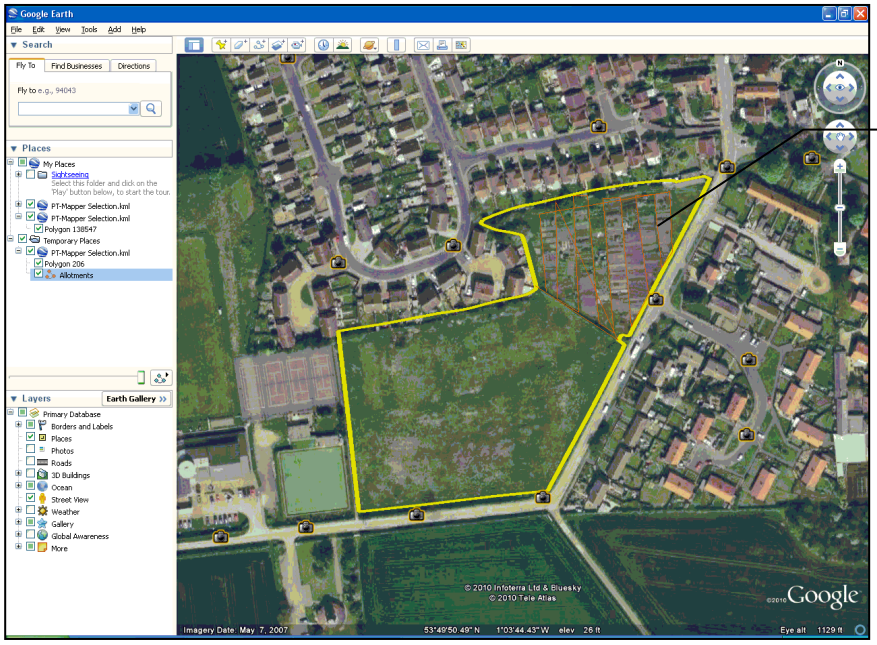


In Google Earth, click on the Add Path tool and a panel will pop-up. Give the path a name and colour:



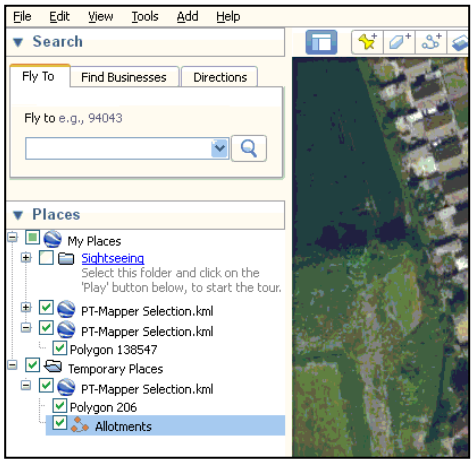
Leave this pop-up on the screen, move the cursor onto the map and draw your line, clicking at each change in direction. When you have finished drawing, click the OK button on the pop-up.

N.B. Each line requires its own Name, so it may be better to draw a single continuous line, copy it to PT-Mapper and then edit it there. In the example below, we have drawn the allotment boundaries as a single line.

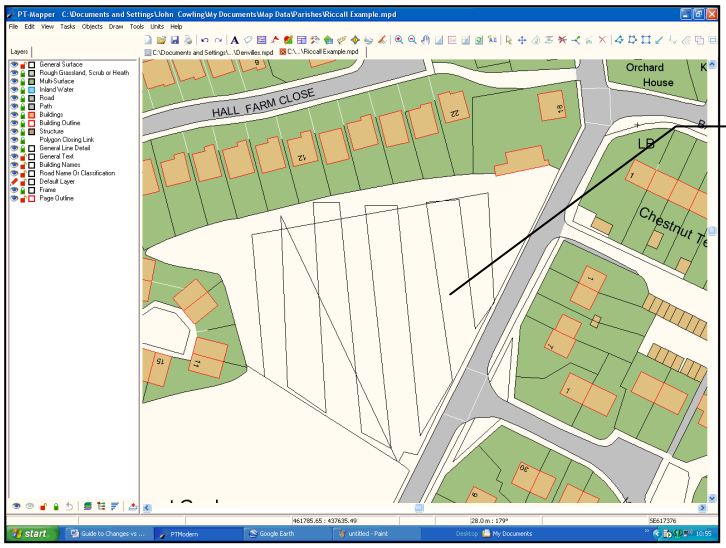


Boundaries drawn as a single, continuous line.

In the LH panel, highlight the name for this feature:



Select Edit, Copy. Now bring PT-Mapper to the screen and click on Edit, Paste KML. The line or boundary you drew will now automatically be placed on the map on the ACTIVE LAYER.



Allotment boundaries transferred, ready for editing.

7. Printing

PT-Mapper Pro enables you to print the whole map or parts of a map at any scale and on any size paper that your printer can handle. There are two ways to print:
1. Print View – prints whatever is on the screen, with a frame surrounding it. Ideal for quick prints when scale doesn't matter.
2. Print Page – prints whatever the Page Outline sits over. You can define whatever paper size and scale you want using File, Page Set Up. If you use the Title Block facility, a title block can be added to the print-out. If you use the Edit, Copy Page facility, a completely separate map of the chosen area can be created first.

7.1 Print View

Zoom in and scroll until the desired map area fills the screen. Then go to File, Print View.

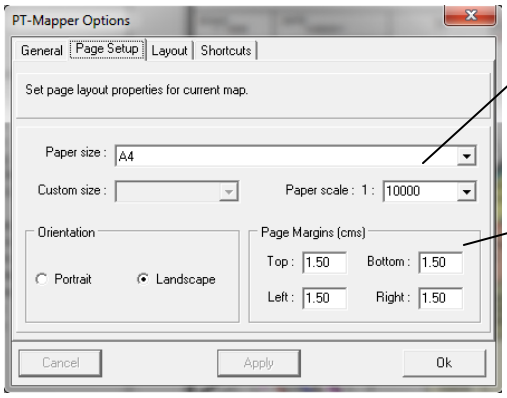
7.2 Print Page

7.2.1 Key points about the page

- What you see is what you get i.e. whatever part of the map sits **within the margin of the page outline** is what will be printed if you select Print Page . The Page Outline gives you a continuous print-preview.
- The inner dotted line represents the margin or limit of printable area (printers cannot print to the edge of a page). Keep the area of interest within this dotted margin.
- The Page Outline is on its own layer and so can be set Visible or not, Selectable or not. The Page Outline can be selected by clicking on any corner of the page outline on the map. (Ensure you get the cross-hair before you click).
- Once selected, the Page Outline can be moved over the map area using the Move tool or the Centre Page tool or the Fit Object to Page tool .
- The corners of the Page Outline can be dragged in or out using the Move Node tool .

7.2.2 Set Paper Size and Map Scale

Select File, Page Set Up to get this screen:



Click here to change paper size. For sizes that your default printer cannot handle, select Custom Size, then choose the custom size required in the box below.

Click here for pre-defined scales. Use smaller scales (higher numbers) to get whole map onto a page. Overtype figure in box to choose non-standard scales.

If you change the scale or the paper size, the Page Outline on the map will change in size, but the bottom-left corner always remains in the same position. To move the page over the area of map for which you require a print, use the Centre Page tool or the Move tool .

Remember:
The area of map that sits within the Page Margins is that which will be printed.
Enlarged scale eg changing from 1:10000 to 1:2500 = smaller Page Outline relative to size of map.
Reduced scale eg changing from 1:500 to 1:1250 = larger Page outline relative to size of map.

7.3 Selecting the Printer

When you select File, Print, the standard Windows Printer selection screen will appear. The default printer will normally be selected, but you can change to another printer here if you wish. At the same time a white frame will appear within the Page Outline to mask off unwanted detail.

7.4 How to Print the Whole Map

Click on the View Page tool and check that the map sits centrally within the Page Margin dotted lines. If the Page Outline is large enough but is off-centre, use the Centre Page tool or the Move tool to slide the Page Outline to position. Note that the Page Outline has its own layer and that this layer must be Unlocked (selectable)
If the Page Outline is not large enough to cover the map, you need to either change to a larger size paper or to reduce the scale. Do this by selecting File, Page Set Up.

If the Page Outline is too large for the map, you can change to a smaller size paper (eg A3 to A4) or you can enlarge the scale. Do this by selecting File, Page Set Up.

7.5 Printing Best Fit to Page

If the scale is not too important and you simply want a best fit to page, set the paper size in File, Page Set Up, zoom in on the required area and use the Centre Page tool to centre the page. Make sure that the Page Outline layer is selectable and use the Drag Node tool to drag the corners of the page in or out to give best fit.

Once the Page Outline is set around the map, you can print.

7.6 Making Lines Print Thicker

A common problem is that a line that looks thick on the screen (say, 2 pixels) will still be a thin line when printed. This can be overcome by setting the Layer Properties for the line to be 5 or 6 pixels thick.

An alternative is to set the Line Thickness in Layer Properties to be in metres. However, the thickness you choose will depend on the scale you use when printing, but typically would be in the range 3 – 10 metres. The other disadvantage of this method is that the line will only become visible when you zoom in, since the screen cannot resolve widths of only a few metres except on high zoom in.

7.7 Printing Examples

7.7.1 Paper size currently set to A3. Wish to print whole map on A4.

Assume current scale is 1:5000 on A3. To print a whole map on A4, the scale must be reduced in order to get the map to fit onto the smaller paper size.

- In File, Page Set Up, click on the scale selection box and choose 1:10000.
- Set the Paper Size to A4.
- Check that in Printer properties, your page size is also set to A4.
- Centre the page around the map using the Centre Page or Move tool .
- Now click on File, Print.

7.7.2 Problems?

a) Whole map won't quite fit onto a sheet of A4 at a scale of, say, 1:10,000?
Select File, Page Set Up and overwrite the scale to say, 1:11000.
Or, see 7.5 above.

b) Map prints out on several sheets of A4?

Paper size is still set to A3 but you have A4 paper in the hopper, or your printer is still set up for A3 paper. Check using File, Page Set Up first, the File, Print, Printer Properties.

7.7.3 Map is currently 1:10,000 on A4. You want a map of a small area at, say, 1:1250 on A4.

This is a frequent requirement for printing detailed maps of buildings, single fields etc.

- In File, Page Set Up, click on the scale selection box and choose 1:1250.
- Centre the page around the area of interest using the Centre Page and/or Move tool .
- Now click on File, Print.

8. Emailing Maps

To email a map to somebody who does not have Pear software, there are two possibilities:

8.1 Create a PDF File

For this, it is essential that you have PDF writer software installed on your computer. Pear Technology's help desk can advise on free or low cost packages available on the internet. Assuming that you do have this software installed:

Open the map.

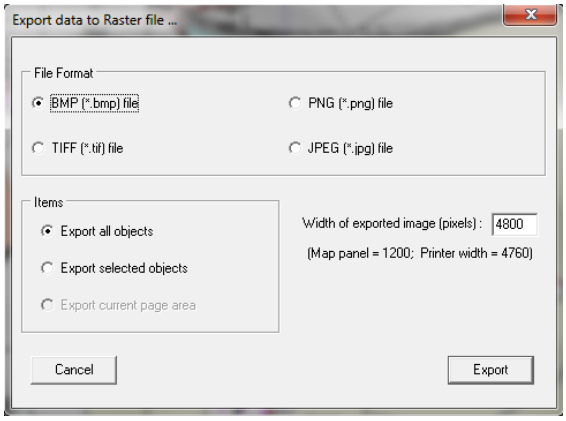
Select File, Print and choose PDF Writer (or similar) as your printer. The PDF software will take over and invite you to save the resultant PDF file in a folder of your choice. This pdf file can then be emailed as an attachment.

8.2 Create a PNG Format Map

PNG is a format that is similar to JPG but gives better quality images. PNG files can be opened with any standard image software such as Microsoft Picture Manager, Paint – or by simply double-clicking on the filename.

Open the map.

Select File, Export, Raster to get this screen:

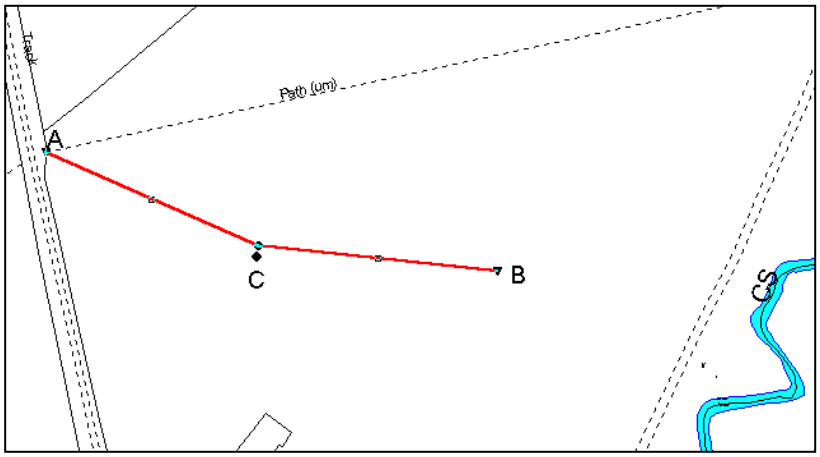


Check the boxes as shown above, set the Width of exported image to 5000 minimum to ensure decent quality, click on the Export button and save the PNG file.

If the resultant image does not have adequate quality, repeat the exercise but increase the "Width of Exported Image" setting to, say 7000. The larger this number, the better the quality but also the larger the resultant file.

9. Typical Tasks

9.1 Draw lines and Measure Distance



Assume that we want to measure the distance from A to B via point C in the above example.

Choose the layer you wish to draw on and make it the Current layer.

1. Select the Draw Polyline tool . When you move back to the map area, a pencil symbol will show.

2. Single click at point A, move the pencil to point C and single click, then continue on to point B, with a clean **double-click** to terminate the line.

3. Right click to switch off the drawing tool.

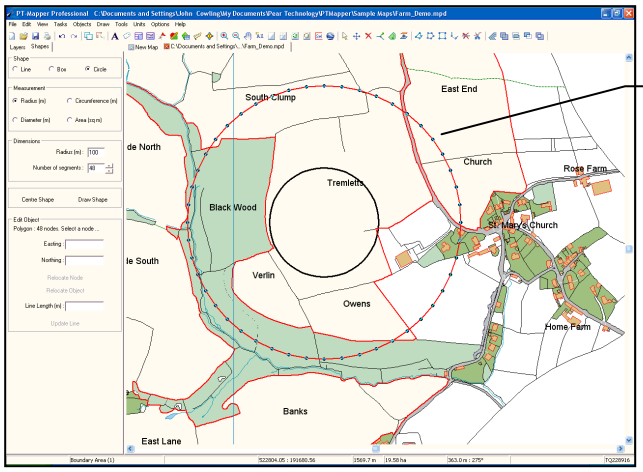
The length of the line will be shown on the Status Bar at the bottom of the screen. Note that the Status Bar also shows the distance and the angle from the last mouse click.

Units can be changed by selecting Units on the Menu line.

9.2 Draw a Circle

Suppose you want to draw a circle of 250m radius:

- In **Layers** mode, create a new layer called Circle. Set as the Current layer and position well down the list so that it sits over other map features.
- Select the Draw Measured Shape tool and in the left hand control panel, chose Circle and set the radius to 250m and number of segments to 48. Click on the Draw Shape button.



Number of segments determines how round the circle will be e.g 8 segments would give an octagon.

A circle of 250m radius and 48 segments will be generated (the more segments there are, the rounder the circle will be).

9.2.1 Concentric Circle

To draw another circle of, say, 100m radius, concentric with the first, change the Radius setting to 100m and click on the Centre Shape button in the left hand control panel.

9.3 Split Areas e.g. Woodland Compartments

PT-Mapper Pro makes it very easy to split one area from another and to know what the resultant areas will be after the split. This technique is useful for splitting fields for different cropping, woodland areas into compartments, dividing up building plots, showing problems and areas of treatment etc. or splitting any plot of land.

STEP 1: Draw and Position the Split Line

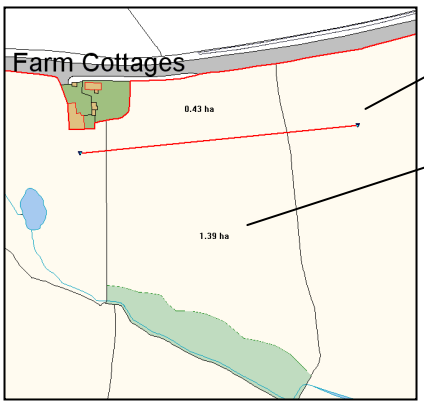
Choose the layer you wish to draw the split line on and make this the Current layer.

Make ALL other layers non-selectable EXCEPT the layer of the area to be split.

It is essential that the area being split is a polygon and not a series of lines, so if necessary first create a boundary for this example. See 9.3). Make sure that the layer the boundary is on is Selectable.

Now select the Draw Polyline tool and draw a line which starts **OUTSIDE the area** and finishes **OUTSIDE the area**. This line can be imagined as a cheese-cutting wire and will be used to cut the area into two.

With this split line selected, take the Move tool (or the Drag Node tool) and move the line slowly up or down. As you do so, the area either side of the line will be shown, so you can adjust the position of the line to give the desired area if you wish.



Start **outside** the area and finish **outside** the area.

Select the Move tool or the Drag Node tool , apply it to one end of the line so that you get a cross-hair. PT-Mapper Pro will immediately show the area on either side.

Once the line is in position, de-select it by clicking on the De-select tool .

STEP 2: Select the boundary to be split by clicking inside it.

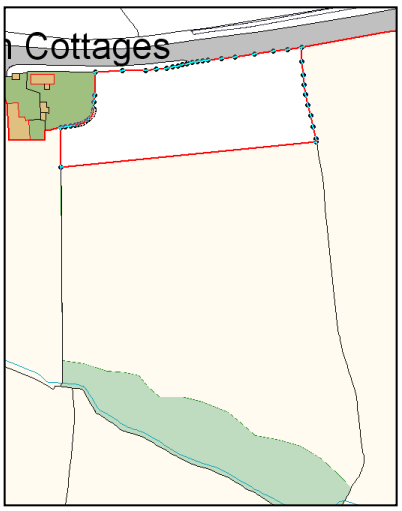
STEP 3: Make the Split

Select the Cut Object tool and apply the cursor to one end of the split line. When, **and only when**, the cursor changes to a cross-hair, left click and the area will split.

Click inside each part and the area and perimeter distance will appear in the Status Bar at the bottom of the screen.

STEP 4: Discard the Split Line

- De-select all objects by clicking on the De-select tool
- Select the split line by clicking on one end of it, then Discard it .



The positions for the boundary line can be easily determined by using the Draw Polyline tool and measuring the distance along each boundary.

You can use the Text tool to write the areas in each part area or use the Identifier tool to assign Compartment Numbers to each area..

9.4 Combine Areas

Supposing that we want to combine two areas into one. This is simple:

1. Make the layer you want the combined boundary to be on the Current layer.

2. Select one area by clicking inside it.

3. Now select the Combine Areas tool and click in the other adjoining area. PT-Mapper Pro will create a new boundary on whichever layer is the Current layer. The original boundaries will still be there but can be discarded by selecting them and using the Discard tool .

9.5 Colouring Areas of a Map

Areas on a map can be coloured differently to represent different categories of area – for example, areas owned by the Council or Housing Association.

Add a new layer called, say, Council Land, and give it a Fill colour. This layer will be the active layer (crayon in front of the layer name).

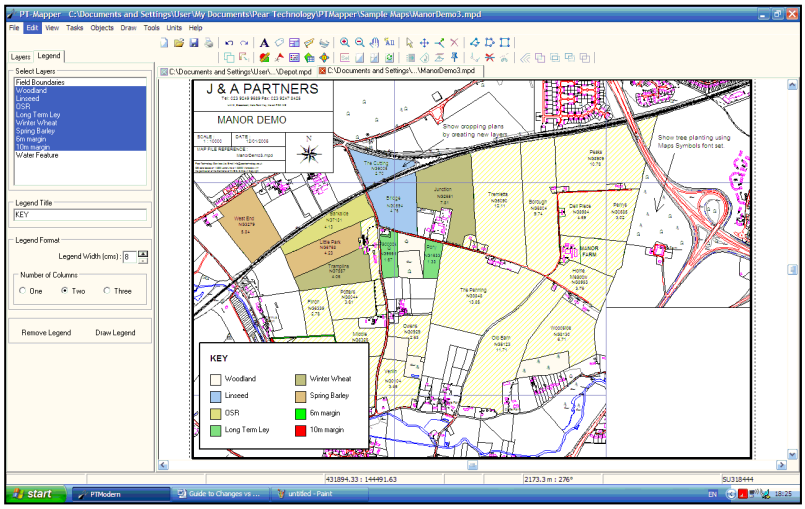
Make the layer that the area is currently on selectable (green tick against the layer) and click inside it to select it.

Now use the Move to Layer tool to move this area to your new, coloured layer.

9.6 Creating a Legend

PT-Mapper includes a tool for automatically creating legends on a map. Click on the tool to bring up the Legend control panel. Multi-select (hold keyboard Ctrl down) to select those layers for which a legend is required.

Note that if a layer has a fill colour then it will be displayed in the legend as a box. Layers without fill colours will appear as lines.



Move Legend box: Switch to the Layers tab and make the Legend layer selectable (unlocked).

Click on a corner of the Legend box to select it, then use the Move tool to drag and drop the legend to its new position.

Legends can be created as 1, 2 or 3 columns and the width adjusted using the up/down counter.

9.7 Change an Object's Layer

Suppose a field now has a different crop or is part of a different farm tenancy, you can easily update your map by moving the field from one layer to another:

Make sure that all layers are un-selectable (locked).

Make the crop or tenancy layer selectable.

Make the receiving layer the current layer by double-clicking on the Eye symbol.

Click inside the field whose crop has changed to select it, click on the Move to Layer tool and the crop layer will be switched to the current layer.

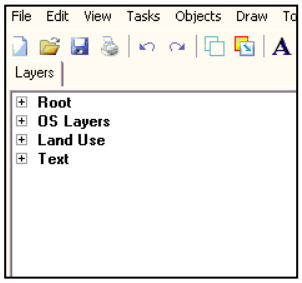
You can do this for multiple areas by multi-selecting (hold down the Ctrl key while you select all the fields or areas you wish to change). The select the Move to Layer tool as before.

9.8 Group Layers into Themes

This feature is useful when a map has a large number of layers, since the layers can be managed as "Themes" rather than as individual layers. For example, all cropping layers could be grouped into a Cropping Theme. All Tenancies could be grouped into a Tenancies Theme.

Once the Themes have been set up, the map structure will have a more logical layout and it will be easier to work with.

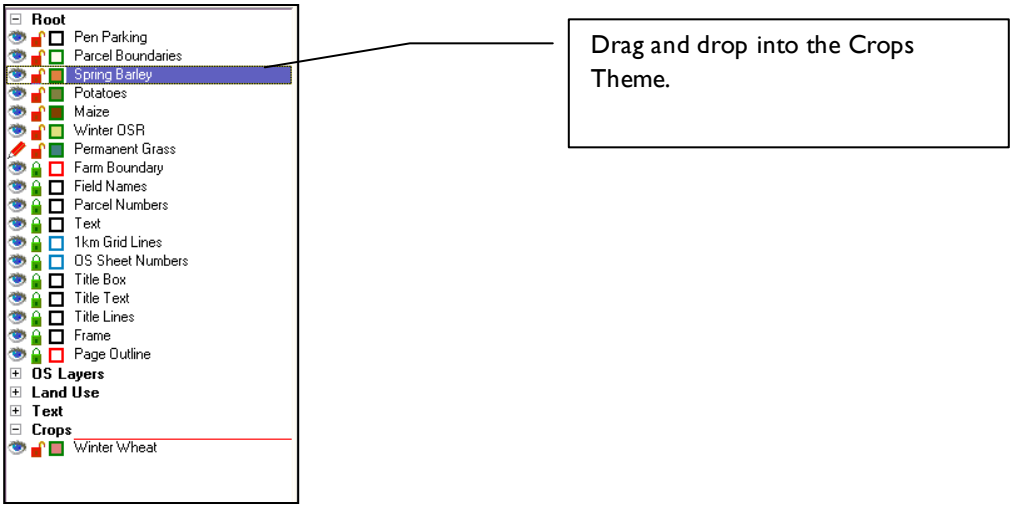
Click on the Theme icon at the bottom of the Layers control panel. The Layers Control panel will change to:



Each Theme can be expanded by clicking on the + icon beside the Theme name.

To add a Theme, right click on an existing theme name and select Add Theme from the pop-up menu.

To move existing layers into the Theme group, expand the list of the Root or other groups and drag and drop the layers into the new Theme:



9.9 Cutting out a Map

Suppose that your master map is set to 1:10000 scale on A4 paper but that you want a map of some buildings at a scale of 1:500 and that you want to save this map as a completely new map, without affecting the master. This is easily done:

- Select File, Page Set Up and set the scale to the chosen value.
- Zoom in so that the area of interest fills the screen and use the Centre Page tool to centre the page around this area. Use the Move tool to fine adjust its position.
- Select Edit, Copy Page.

You may need to delete unwanted text and change font sizes, but the map can now be saved under a new name, given a title block (Section 6.10) etc.

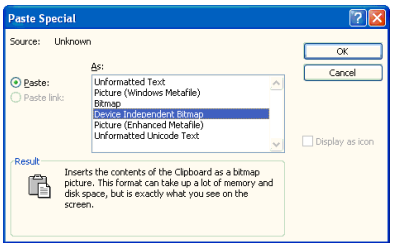
9.10 Copy a Map into a Report or Document

Open the required map in PT-Mapper Pro.

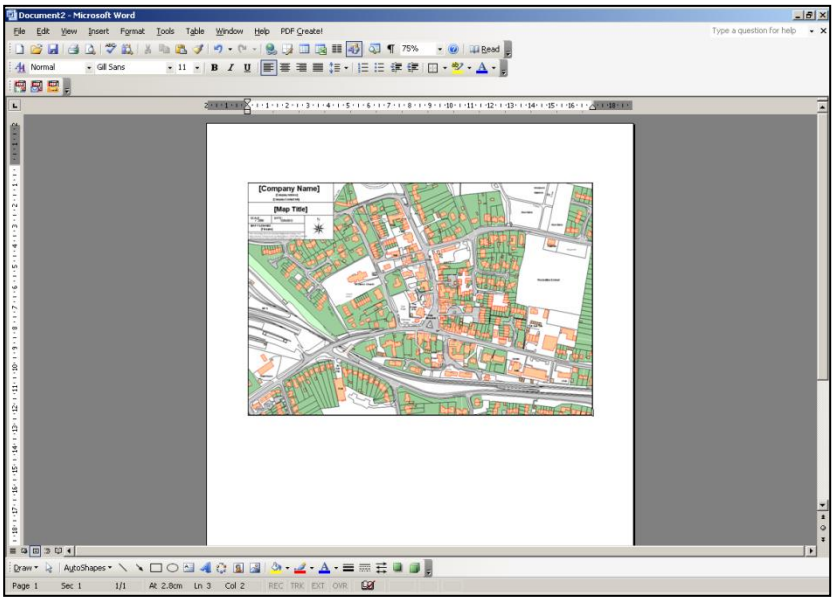
Select Edit, Copy All on the top Menu line.

Switch to the receiving application eg Microsoft Word, Excel, Publisher, Powerpoint and position the cursor at the required location.

Click on Edit, Paste Special and select Device Independent Bitmap:



Click OK and the map will be pasted into your document to give a good quality image.



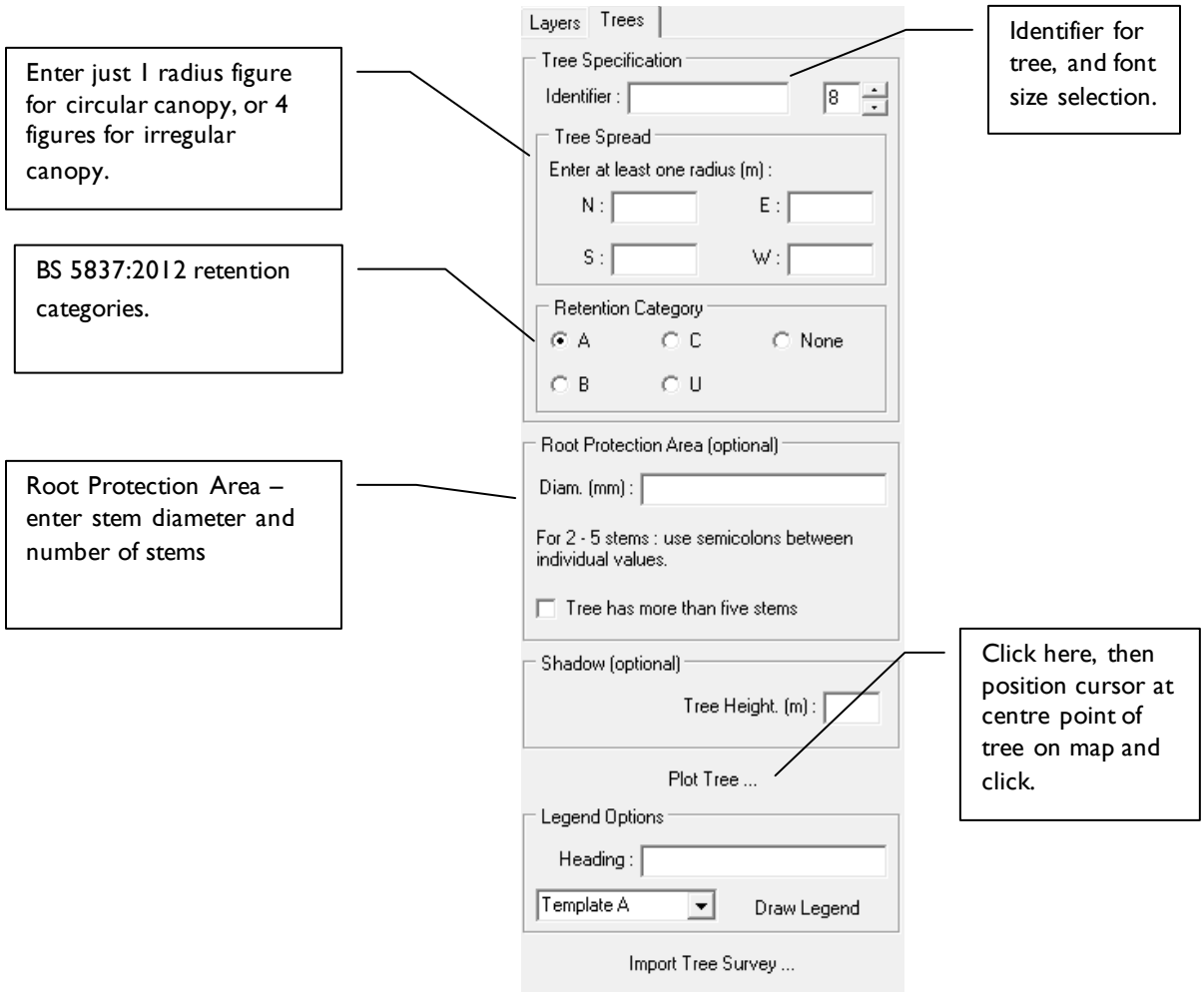
The map image can be re-positioned, re-sized as usual.

9.11 Adding Trees to a Map

Trees or tree symbols can be added in several ways according to requirements. Remember to first make the correct layer the Current or Active layer:

9.11.1 Plot Single Trees according to specified dimensions

Click on the Trees button to bring up the Tree control panel:



As soon as you plot a tree on a map, new layers will be added to the existing list of layers, one for uncategorised, and one for each of the BS5837:2012 retention categories. To facilitate export to CAD in DXF format when layer colours can be lost, the retention category is automatically added as a "Description". If this is not wanted, it can be deleted.

9.11.2 Plot Trees including Canopy Spread directly from Tree Survey Results

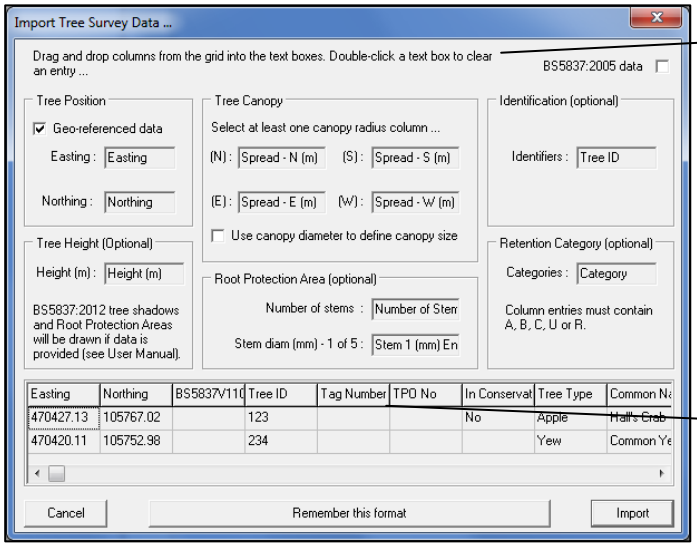
Tree surveys carried out with a tablet PC or hand-held device can be used with PT-Mapper to automatically plot trees on a map. For this to function, it is essential that:

a) The survey results are available as a Comma Separated Variable text .csv text file. (Can be created in Excel). The survey data must include easting and northing coordinates.

b) Canopy spread has been recorded.
c) Coordinates from the survey match those of the map.

Surveys carried out using the standard formats supplied by Pear Technology with the PT-Mapper Pro and Tree Minder products will be fine, and other surveys can be accommodated provided they meet the above criteria.

To plot trees from a survey, open the map, select the Trees tab and click on the Import Tree Survey button to get this screen:



If a Pear Technology Scheme has been used with the PocketGIS software, PT-Mapper will automatically recognise the format and structure of the file.

Set the ID font size and click on the Import button to import and plot the tree locations.

If you wish to import from your own survey, drag the column headers onto the matching box above so that PT-Mapper knows which of your columns are eastings, northings, Tree ID etc.

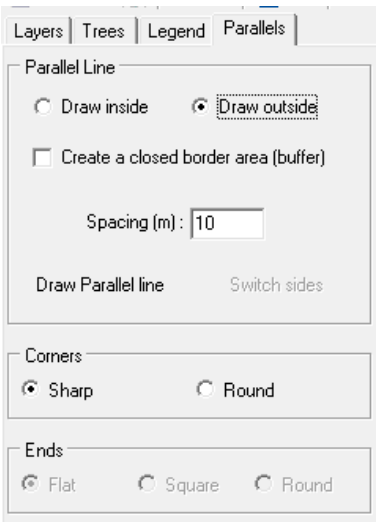
You can then click on "Remember this Format" to avoid having to repeat for the next survey.

9.12 Buffering Tool

For example, a protection zone around lines or groups of trees.

Add a layer called Protection Zone, then select the lines or groups of trees.

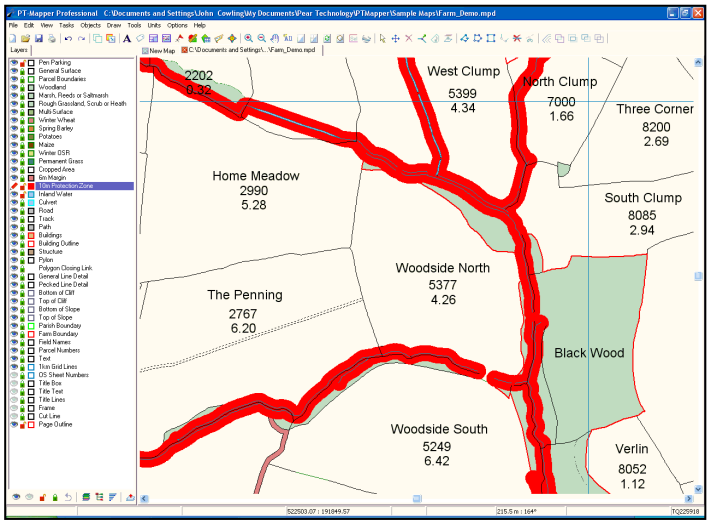
Click on the Buffer tool and set the spacing to the required width.



Note – If you only select one object make sure the "Create a closed border area buffer" is ticked.

Click Ok and boundary constructed.

De-select everything. Your map should now look like this:



9.13 Red-Line an Area

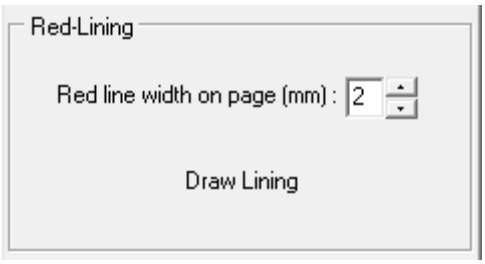
Objective is to create a thick red line that sits just inside the boundary line.

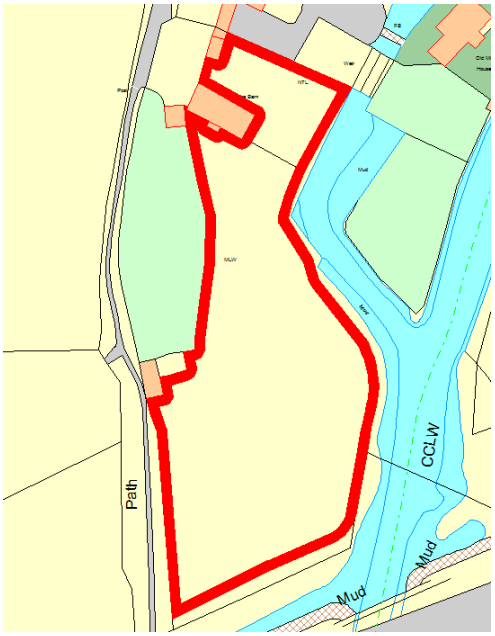
Select the boundary to apply a red line to.

Select the Buffer tool

Click on the Draw lining button to add a red line boundary.

If you need to adjust the width of the red line, click inside the red line to select it and press Delete (be careful not to delete the boundary by mistake). Adjust the Red Line width to suit and then click on the Draw Lining button.





10. SAVE THE MAP

10.1 General

Saving maps works in the exactly the same way as saving other files.

Maps can be saved on your local hard drive or on a server. Either way, it is essential to maintain effective back-ups, so that if your computer malfunctions, you will be able to recover your maps.

Note that when working with very large file sizes held on a server, maps can take a long time to open and a long time to save, in which case we recommend that you temporarily save your map to a local drive whilst working on it and only save it back to the server when your work has finished.

To save your map, select File, Save or Save As and PT-Mapper Pro will save your file with a file extension of .MPD.

IMPORTANT!

- Using File, Save will save your map under its current name, thereby over-writing the previous level.
- Using File, Save As will enable you to save the map under a new name, thereby retaining the previous level.

If carrying out extensive work on a map, we recommend that you save the map periodically under a different name eg Farm Demo 1a.mpd, then Farm Demo 1b.mpd etc, finally saving the finished version as Farm Demo 2.mpd. In this way you protect your work and can always backtrack to a recent level if anything goes wrong.

10.2 Back-up

- There is no other automatic back-up/save facility in PT-Mapper Pro. Therefore it is important you save your map whenever you have successfully completed changes that you wish to keep.
- PT-Mapper Pro does offer the option to save a copy of a map file on opening the map. This will be saved as Filename.bak. To use this, select Options on the Menu line and then Options again and check the relevant item in the Options list.
- As with any computer records, it is essential to create back-up copies of all your critical maps from time to time.

10.3 Back-Up Option

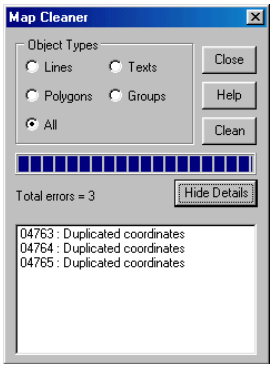
If you do not want PT-Mapper Pro to automatically save a copy of your map whenever you first open it, you can switch this function off by selecting Options on the Menu line at the top of the screen. The select Options again and choose the General tab. De-select the back-up option here.

11. TROUBLE-SHOOTING

11.1 Map Cleaner

During map creation and editing, digital maps can become degraded due to double mouse clicks creating duplicate nodes, zero length texts being left on the map, or zero length lines being created. The Map Cleaner facility enables PT-Mapper Pro to detect and repair these types of problem, thereby keeping the whole system robust and trouble-free. If you do experience any untoward problems, run the Map Cleaner:

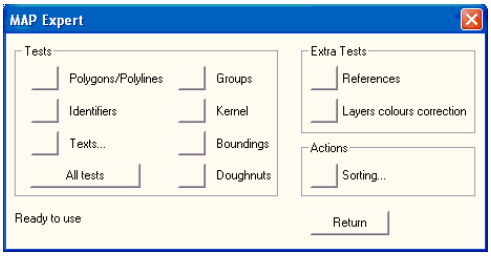
Click on Tasks in the Menu line and click on the Map Cleaner tool If problems are found, they will be listed:



Click on the error(s) to highlight them and they will be highlighted on the map. Click on the Clean button and they will be fixed.

11.2 Map Expert

This offers some additional map "cleaning" features and can be used as well as the Map Cleaner. Click on Tasks in the Menu line and click on the Map Expert tool :



Click on All Tests and a diagnostic on the map will run. Click OK and any problems found will be fixed.
If problems are found, they will be listed:

11.3 Other Problems

11.3.1 Can't select an object?

a) Make sure that the layer the object is on is selectable. Tip: if you're not sure which layer the object is on, switch to Layers mode, and click on the All Selectable button to make all layers selectable. Now click on the object at a node and it should select. Once selected, you can see which layer it's on by looking at the Status Bar at the bottom of the screen.

b) If (a) doesn't work, try selecting another object on the map, then returning and trying again.

11.3.2 Slow to print?

Printing the first copy of a map on a laser printer and on some makes of inkjet printer can take 2-3 minutes. Don't be alarmed, just try to be patient!

11.3.3 Area won't divide?

If you are having trouble splitting an area such as a development plot or a field into different parts, it's probably because the area is not a polygon or the "split" line does not meet or cross the area boundaries. To extend the line beyond the boundary to be split, select the line, then use the Move Node tool to drag the end of the line over the boundary.

11.3.4 Printing problems?

a) Map prints on several sheets of A4

This is probably because your Page Size is set to A3 but your printer has A4 paper. Either print onto A3 paper, or go to Print Mode, click on the Page Set Up button and set the Page Size to A4. Note that you might also have to change the scale in order that a sheet of A4 accommodates the map.

b) Only part of a map prints out.

This is probably because the Page Outline does not sit over the desired part of the map. Go to Print Mode, zoom out so that you can see the Page Outline relative to the map and ensure that the outline encloses the area you want. You can select the Move tool , move the cursor to one corner of the Page Outline until you get a cross-hair, then hold the left mouse button down and drag the page to the desired position.

11.4 Help

There is now a direct link to the Pear Technology remote access support service.

First, call the Pear Technology Support line on 023 9249 9689 and if the problem or question can best be resolved by establishing remote access to your computer, the support specialist will ask you to click on Help, then Pear Support. This will give a password and ID which will enable temporary remote access to your computer such that the support specialist can examine the problem on your computer or use the link to demonstrate how best to go about a particular task.

The link is temporary and always under your control – we cannot access your computer at a later date without you first supplying us with your ID and Password.

APPENDIX A: TRANSFERRING MAPS TO A MOBILE DEVICE

Important! For PT-Mapper Pro to be able to transfer a map and associated survey schemes to a mobile device, it is essential that:

a) Microsoft Active Sync (Windows XP) or Windows Mobile Device Centre (Vista, Windows 7) is installed on your computer. These are freely available from the Microsoft Downloads web site.
b) It is also essential that PocketGIS software is installed both on your office PC and on the mobile device.
c) Survey schemes need to be previously set up and saved in the Surveys folder in My Documents\Pear Technology\PTMapper\Surveys.

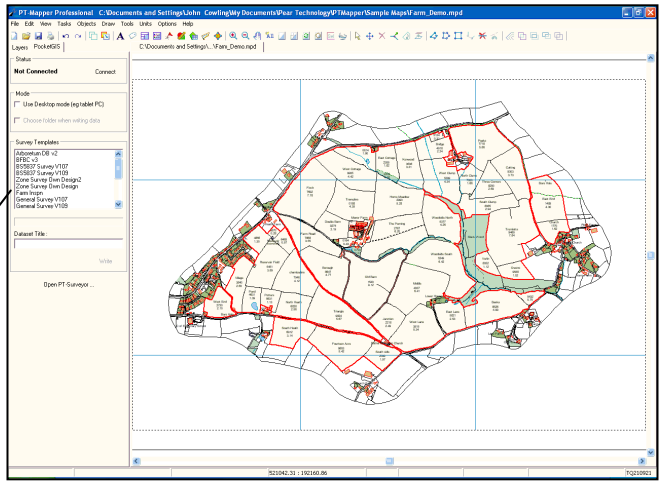
Open the map you wish to use for your survey. If this is a large map, you may wish to create a map of just the area to be surveyed using the Copy Page tool, since this will make the map much faster to transfer to and operate on a mobile device.

Select the PocketGIS tool and the left hand control panel will change:

Ensure that your mobile device is connected.

Only check this box if using a tablet or laptop PC for the survey.

List of survey schemes saved in My Documents\Pear Technology\PTMapper\Surveys.



Select the survey or survey schemes that you may require when on-site from the list shown. Give the survey a brief title that will help identify it in future and click on the Write button.

The map and associated surveys will be transferred to the mobile device.

PT-Surveyor is a separate program that enables you to modify and/or create your own survey schemes.

APPENDIX B: WORKING WITH .SHP FILES

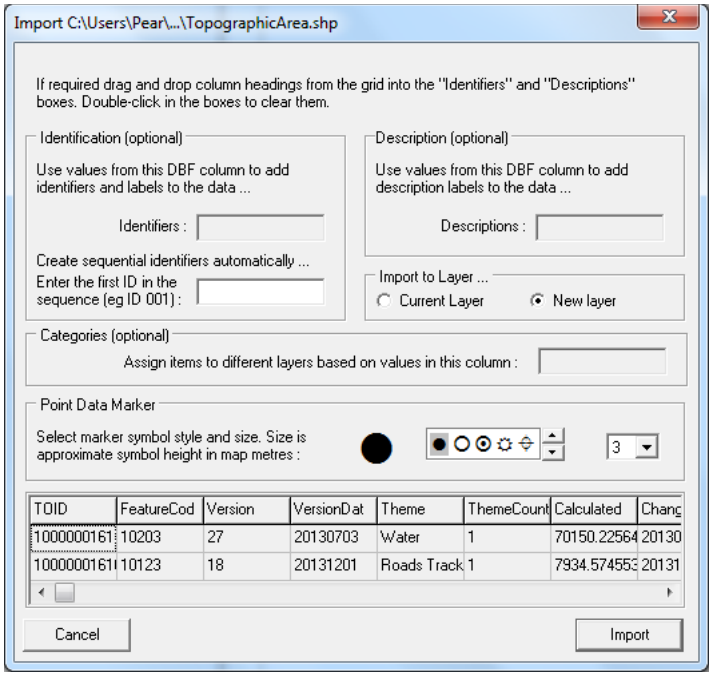
The "Shape" (.shp) format is a common data interchange format. Many GPS systems will export their data in .shp format which is likely to be in WGS84 Lat/Long coordinates. To portray this data onto a flat Cartesian coordinate

map such as an Ordnance Survey map requires conversion from Lat/Long to, in the case of Great Britain, Ordnance Survey National Grid.

PT-Mapper does this for you, and lets you export your data in .shp format so that it can be used by other applications.

B.1 Importing a Shp File

On starting PT-Mapper, click on File, New to get a blank map page. Then select File, Import, Shapefile. PT-Mapper will automatically determine the conversion required and convert the data into Cartesian coordinates. Once opened, all the usual PT-Mapper operations can be carried out.



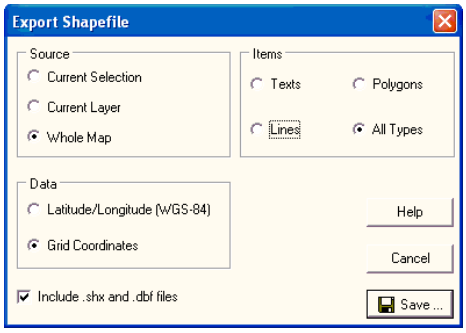
If the .shp file has an associated .dbf file with attribute information eg tree identification numbers, check the "Use *.dbf column" and select the appropriate column from the drop-down list. PT-Mapper will automatically create an identifier for each object from the selected column. Similarly, a second column can be selected which will be assigned as the "Description" part of the ID. Alternatively, the column headers can be dragged and dropped into the matching box.

If the categories box is left blank, then all of the features imported from the file will be added to a single map layer. Identifiers and descriptions will be added to a separate layer.

It is often useful to divide the data into separate layers on a map. This can be done automatically when the data is imported, simply drag a column header into the Categories box. PT-Mapper will assign the features to different layers according to values in the column. A typical example of when this might be used is when tree survey data is imported into a map, the areas could be divided into layers based on overall condition.

B.2 Exporting a Shp File

Select File, Export to get a selection screen:



Choose the desired options and click on Save.

INDEX

B

Back-up 55
BAK format 55
Border Area tool 16
Boundary removal 48
Buffer tool 16

C

CAD 25
Centre Page 27
Centre Page tool 13
Changing layers 22
Circles, concentric 46
Colouring a map 48
Combine Polygons tool 16
Connect lines 16, 28
Copy map to a report 50
Copyright 8
Copyright statement 34
Create a new map 50
Cut Object 16
Cutting a line 28

D

Data capture 58
De-Installation 8
Delete Node 16
Demonstration Maps 7
De-Select 14
Discard 14
Distance measurements 45
Dividing areas 46
Drag Node tool 16
Draw a circle 45
Draw a line 45
Draw Arrow tool 15, 29
Draw Measured Shape operation 29
Draw Measured Shape tool 14
Draw on a map 28
Draw Polygon 15, 29
Draw Polyline 15, 28
Draw Rectangle 15, 29
DWG Format 25
DXF Format 25

E

Emailing a map 44
Evaluation period 8, 10
Exclude Area tool 16
Export SHP format 59

F

Field splitting 46
Fit to Page 27
Fit to Page tool 13
Font size 30

G

Google Earth links 37
Group Objects tool 14

H

Help 57

I

Identifiers Operation 32
Identify tool 14
Import from CAD 25
Import Shp files 58
Installation 8
Introduction 7

J

Jargon 7
Join lines 28
Join Lines tool 16
JPG format 35

K

Keyboard shortcuts 18

L

Layer groups 49
Layer Groups 22
Layer name, edit 22
Layer number 22
Layer order, changing 22
Layer Scale Ranges 23
Layer selection problems 56
Layer symbols 11
Layer Themes 22
Layers description 19
Layers, active layer 21
Layers, add new 20
Layers, moving object to different layer 48
Layers, order 21
Layers, visible and selectable 21
Legend creation 36, 48
Licence 8
Linking, map to data 32
Logos 35

M

Make a Polygon 28
Map Cleaner 56
Map cut-outs 50
Map Expert operation 56
Map Expert tool 16
Map scale 41
Map units 7, 17
Map, open a 10
Markers 31, 32
Markers tool 14
Measure distance 28
Menu Lists 12

Mobile device connection 58
Move 14
Move text 30
Move to Layer 15
Multi-selection 27

N

Nail tool 14
Node 7

O

Open map 25
Options 55
Options Menu 17
Overlapped Area tool 16

P

Page margin 41
Page outline 41
Page Set Up 26
Page size 41
PDF format 44
Pen parking layer 21
Place Markers operation 31
PNG format 44
PocketGIS link 58
Polygon 7
Polyline 7
Presentations 50
Print Page 41
Print View 41
Printing 41
Printing examples 42
Printing problems 42
Problems selecting an object 56
Problems with printing 57
Problems, Map Cleaner 56
PT-Maplink 32
PT-Surveyor 58

R

Red-line an area 54
Re-do 12
Redraw Map tool 13
Registration 8, 10
Reports 50
Rotate text 30
Rotate tool 14

S

Saving a Schedule 37
Saving the map 55
Scale 41
Scale Ranges 23
Schedule Maker operation 37
Scroll a map 27
Select objects on map 24
Selecting areas 24
Selecting lines 24
Selecting objects on the map 27
Selecting text 24
Selecting the Page Outline 41
SHP format 58
Slide tool 14
Split line 46
Splitting areas 46
Status Bar 12
Street Finder 36
Street Gazetteer 36
Survey schemes 58

T

Tabbed maps 11
Tape Measure 28
Text 30
Text Alignment 31
Text edit 30
Text rotate 30
Text tool 14
Text, adding 30
Text, editing 30
Themed layers 22
Themes of layers 49
Timelock 8, 10
Title Block tool 12, 14, 34
Title Blocks 34
Toolbar descriptions 12
Toolbar layout command 17
Toolbars 11
Tools customisation 12
Transform command 15
Translucent layers 22
Transparency 22
Tree Placement 51
Trees, adding to map 51
Trees, importing survey data 52
Trees, plotting on map 51
Trial Period 8
Trouble-shooting 56

U

Undo 12
Ungroup Objects tool 15
Units 17
Units of measure 7
Updates 9

V

View All 13
View Page 26
View Selected Objects 13
View Selected Objects tool 27
View Whole Page 13

Z

Zoom In 13
Zoom In and Zoom Out 26
Zoom Out 13